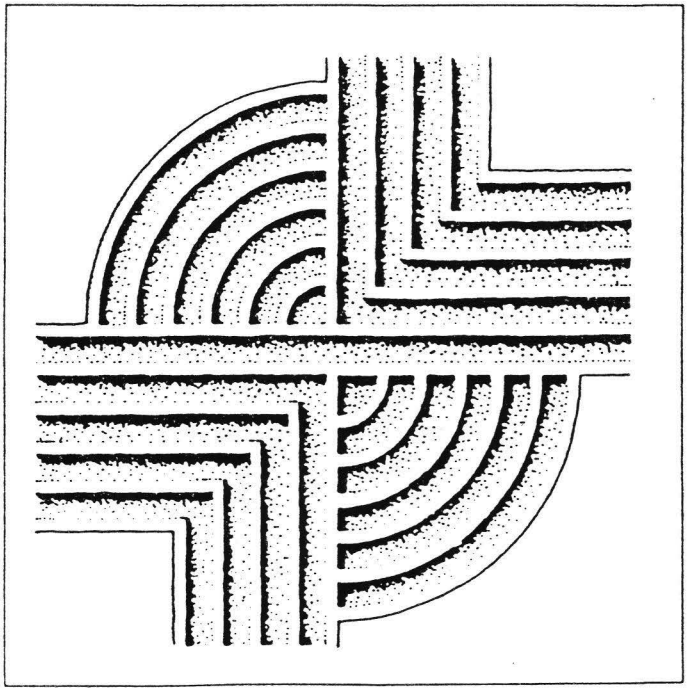
AN ARCHAEOLOGICAL SURVEY OF THE 522 HA JAECK DROP ZONE AND 241 HA TAYLORS CREEK TRACT, FORT STEWART, LONG AND LIBERTY COUNTIES, GEORGIA



CHICORA FOUNDATION RESEARCH SERIES 186

AN ARCHAEOLOGICAL SURVEY OF THE 522 HA JAECK DROP ZONE AND 241 HA TAYLORS CREEK TRACT, FORT STEWART, LONG AND LIBERTY COUNTIES, GEORGIA

Prepared For:
National Park Service
Southeast Region
75 Spring Street, S.W.
Atlanta, Georgia 30303
Funded by the United States Army

Under:
Contract Number 1443CX500095044
Purchase Order Number 1443PX500096042

Prepared By:
Michael Trinkley
William B. Barr
and
Debi Hacker

Chicora Research Contribution 186

Chicora Foundation, Inc.
P.O. Box 8664 ▪ 861 Arbutus Drive
Columbia, South Carolina 29202-8864
Email: chicora1@aol.com

September 3, 1996

This report is printed on permanent paper ∞.

ABSTRACT

This study represents an intensive archaeological survey of two areas of Fort Stewart, Georgia known as the JAECK Drop Zone and the Taylors Creek area. The JAECK drop zone, located in Long County, Georgia, contains approximately 522 ha and the Taylors Creek area, located in Liberty County, Georgia, contains approximately 241 ha.

This work is being done in order to fulfill compliance with the National Historic Preservation Act (Public Law 89-665, as amended by Public Law 96-515), Guidelines for Federal Agency Responsibilities, under Section 110 of the National Historic Preservation Act, Army Regulation AR 420-40, and 36CFR800 (Protection of Historic and Cultural Properties). The project is administered for the United States Army by the National Park Service (NPS), Southeast Regional Office. The scope of work specified that the entire project area be surveyed as high probability using transects and shovel tests spaced at 30 m intervals.

The primary purpose of this investigation is to identify and assess the archaeological remains present at Fort Stewart for the National Register of Historic Places. There were also a number of secondary goals which included:

- determining the effectiveness of 30 m interval transects at locating and assessing both prehistoric and historic sites;
- exploring the effectiveness of the current Fort Stewart predictive model and examining prehistoric and historic patterns of land use, location, and site intensity;
- exploring site function/duration based on artifact content; and
- better understanding the regional culture history.

These investigations incorporated a review of previously reported site files located at the office of the base archaeologist. Four previously recorded archaeological sites were within the survey boundaries. In addition, the base's Historic Preservation Plan was consulted regarding sites or structures on the National Register of Historic Places within the two survey areas. Only the community of Taylors Creek (9LI311) was recorded as being potentially eligible. The Georgia Office of State Archaeology, the Fort Stewart Historic Preservation Plan, and other published reports regarding previous research conducted on base, were also consulted.

Eleven archaeological sites and 12 isolated occurrences (which are also assigned site numbers) were identified during the survey. Five of these sites (9LG26, 9LG31/9LG46, 9LG44, 9LG45, and 9LG47) and 12 isolated occurrences (9LG50 - 9LG61) were found in the JAECK Drop Zone. Six additional sites (9LI307, 9LI311, 9LI357, 9LI358, 9LI359, and 9LI362 [which had the provisional number 9LI(FS)57]) are recorded in the Taylors Creek survey tract.

None of these sites are recommended eligible for inclusion on the National Register of Historic Places. Two sites — 9LG47 and 9LI357 — are recommended as potentially eligible for inclusion on the National Register, pending the recovery of additional information (in one case the bulk of the site appears to be situated outside the survey tract and in the other case additional test units are necessary to assess integrity and site density). One site, 9LI362 could not be indentified by this study. No additional survey or investigation is recommended for the remainder of the sites, which are recommended as not eligible for inclusion on the National Register.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACKNOWLEDGEMENTS

While the work at Fort Stewart was conducted in compliance with various national historic preservation requirements, we wish to thank all of those involved for their support and interest in the project. In particular, at Fort Stewart, we thank Mr. David McKivergan (Base Consulting Archaeologist) and Clay Helms (ORISE intern) for their assistance providing ethnographic and archival data, locating aerial photos of the survey areas, and assisting in defining site boundaries. Mr. Jeff Andrews of Integrated Training Area Management provided us with GPS assistance which allowed us to provide GPS differential corrections. Dr. David G. Anderson (National Park Service) administered the project for Fort Stewart. We appreciate his interest, encouragement, and confidence. Ms. Kimberly Washington (National Park Service) assisted us in navigating the paperwork for payment — a seemingly essential component of science.

We would also like to thank Mr. John F. Chamblee and Mr. Steve Butler of the Georgia Archaeological Site Files for providing direction concerning the filing of site information and assistance in providing publications related to the background research of this project. Also, Mr. David McKivergan for assisting in the clarification of curatorial issues.

The job, however, has been made much easier by the tremendous number of individuals who have gone before us and on whose work we have repeatedly relied. Some were instructors, some were colleagues, some were collectors, a few crossed these lines, and a very precious few were also friends.

The success of this project is largely due to the dedication and professionalism of the field crew which included Mr. Ray Arbaugh, Ms. Kara Bridgman, Mr. William Davies, Ms. Sarah Greene, Ms. Martha J. Houston, Ms. Wendy Jordan, Mr. Hollis P. Lawrence, Mr. Troy O. Martin, Ms. Rozanna Pfeiffer, Mr. Shawn T. Small, and Mr. Phillip Quirk. The survey's were conducted from December 10, 1995, to January 31, 1996 and we appreciate their dedication and hard work. Thanks also to Ms. Windi O'Connor and Ms. Rachel Brinson who cataloged and processed the collections for curation.

INTRODUCTION

Survey Background

Investigations of the 522 ha JAECK Drop Zone and the 241 ha Taylors Creek area of Fort Stewart, Georgia were conducted by Mr. William B. Barr of Chicora Foundation, Inc. for the National Park Service. Fort Stewart is located in southeastern Georgia and encompasses portions of Liberty, Long, Tattnall, Evans, and Bryan counties (Figure 1). The survey area known as the JAECK Drop Zone is located entirely within Long County (Figure 2), and the survey area known as Taylors Creek is located entirely within Liberty County (Figure 3).

Two major highways run through the base. Georgia State Highway 144 travels east-west and Georgia State Highway 119 travels north-south. Intersecting these main roads at various locations within the base are a network of primary and secondary clay or sand roads. These were found in both survey tracts. The clay based, primary roads provide access to a number of secondary perimeter and firebreak roads, as well as random two-rut vehicle tracts. Many of these roads were constructed utilizing fill from numerous borrow pits located on base. A number of these roads, such as Fort Stewart Road FS144, follow eighteenth and nineteenth century roadbeds. All of these roads assisted in accessing different portions of the survey areas.

Within the JAECK Drop Zone area the major north-south road is Fort Stewart Road 5. Fort Stewart Road 9B constitutes the northernmost east-west boundary of the survey area. South of this, the east-west Fort Stewart Road 4 quarters the project area. A single vehicle width, two-rut east-west track defines the southern boundary of the project area. The western boundary coincides with the location of Slades Branch drainage and the eastern boundary follows the north-south line of Fort Stewart Road FS33B (Figure 4). As well, a majority of the JAECK Drop Zone area is heavily traversed by tank tracks or maneuver lanes.

The Taylors Creek area contains two main base roads. Fort Stewart Road FS144, running east-west, bisects the entire project area. The major north-west transportation route is Fort Stewart Road 40. The eastern boundary of the project area is Georgia State Highway 119, and the western edge of the survey area is bounded by an unnamed drainage which runs between Fort Stewart Pond 4 to the north and Cedar Bay to the south. The northern edge is bordered by Fort Stewart Pond 4, and the southern edge is bounded east-west by several unnumbered borrow pits and the base ammunition storage facility (Figure 5). These boundaries, shown in Figure 5, correspond to those issued in the NPS purchase order. The borrow pits in the survey tract were not surveyed.

Both the JAECK Drop Zone and the Taylors Creek area are heavily wooded with a mix of pine and hardwood. Cleared areas, within their boundaries, are the result of burning operations conducted by Fort Stewart personnel. Sparse grass can be found throughout a majority of these areas while those areas near the drainages and marshlands tend to have thicker vegetation.

The entire study area was examined using transects spaced at 30 m intervals. Shovel tests were placed at 30 m intervals along these transects. Once an archaeological site was identified, the area was shovel tested on a north-south cardinal grid pattern at 10 m to 20 m intervals. The size of site testing intervals was determined by site size. In addition, at least one 50 cm square test unit was excavated at each recorded site.

Measurements, in compliance with the National Park Service scope of work, were taken using metric units. In order to maintain consistency throughout this research, all measurements are provided using metric units and Table 1 provides conversions to English measures. The only

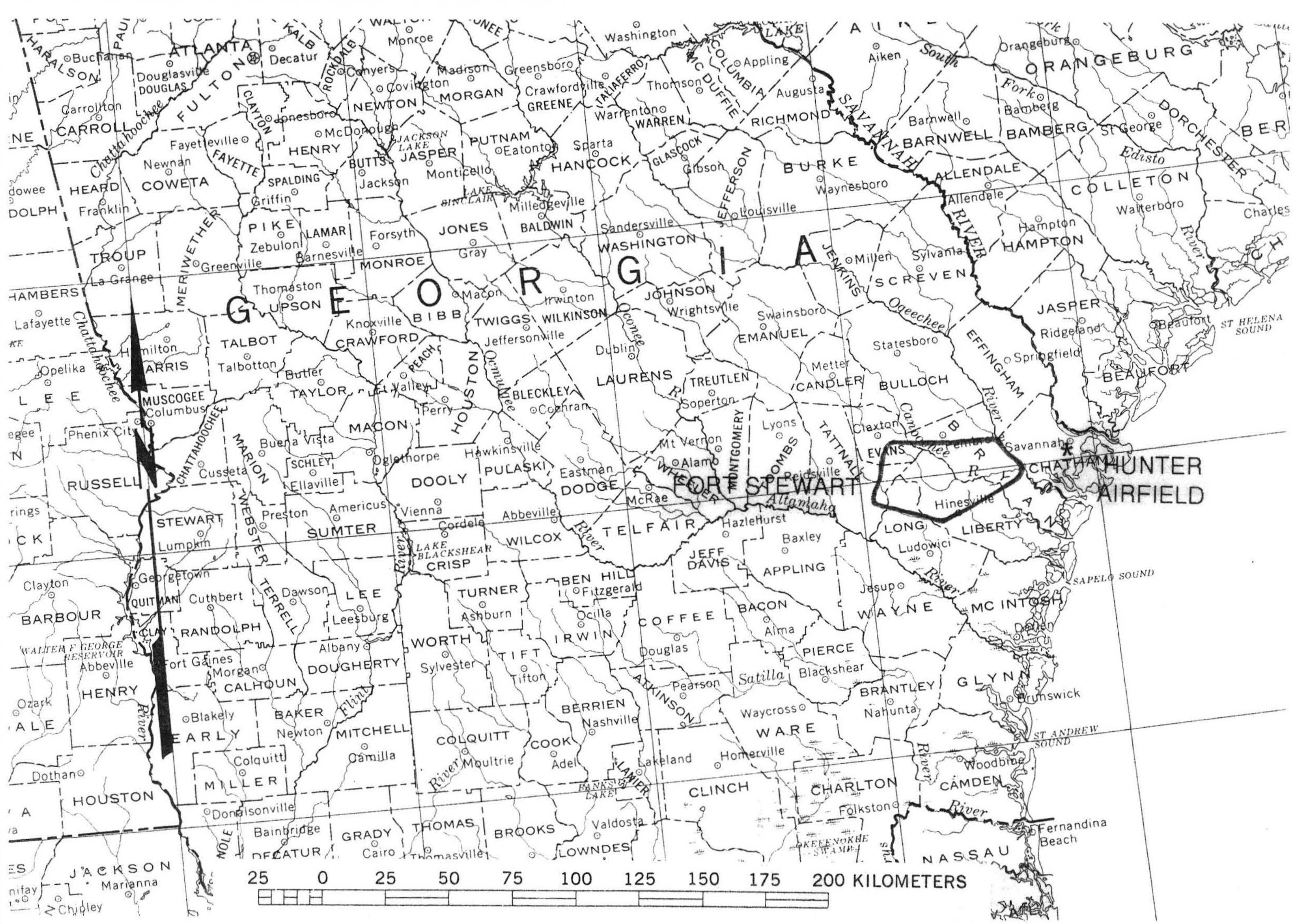


Figure 1. Location of Fort Stewart and Hunter Army Airfield in Coastal Georgia (base map is USGS United States, 1972,

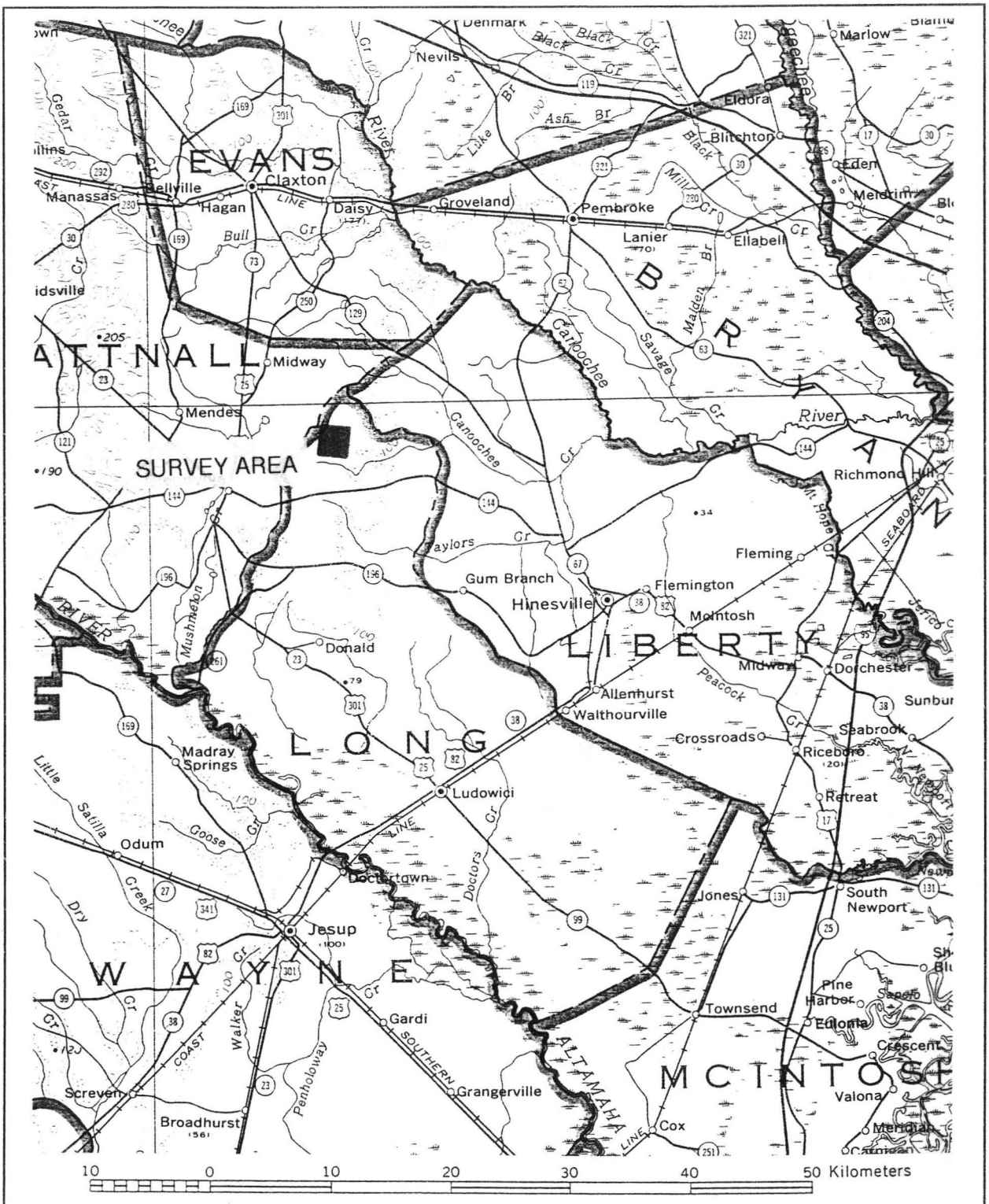


Figure 2. Location of the JAECK Drop Zone survey tract in Long County, Georgia (base map is USGS, State of Georgia, 1977, 1:500,000).

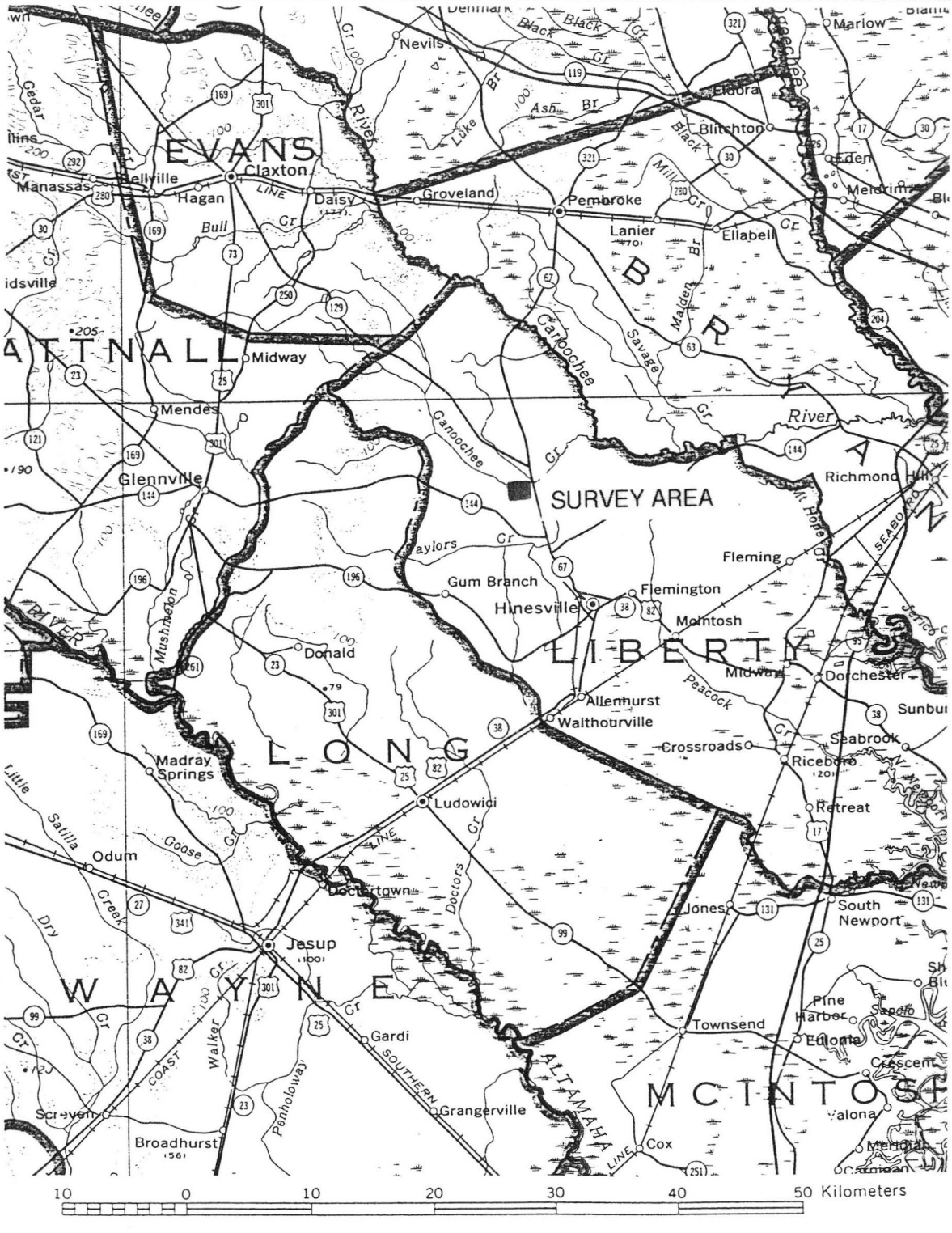


Figure 3. Location of the Taylors Creek survey area in Liberty County, Georgia (base map is USGS, State of Georgia, 1977, 1:500,000).

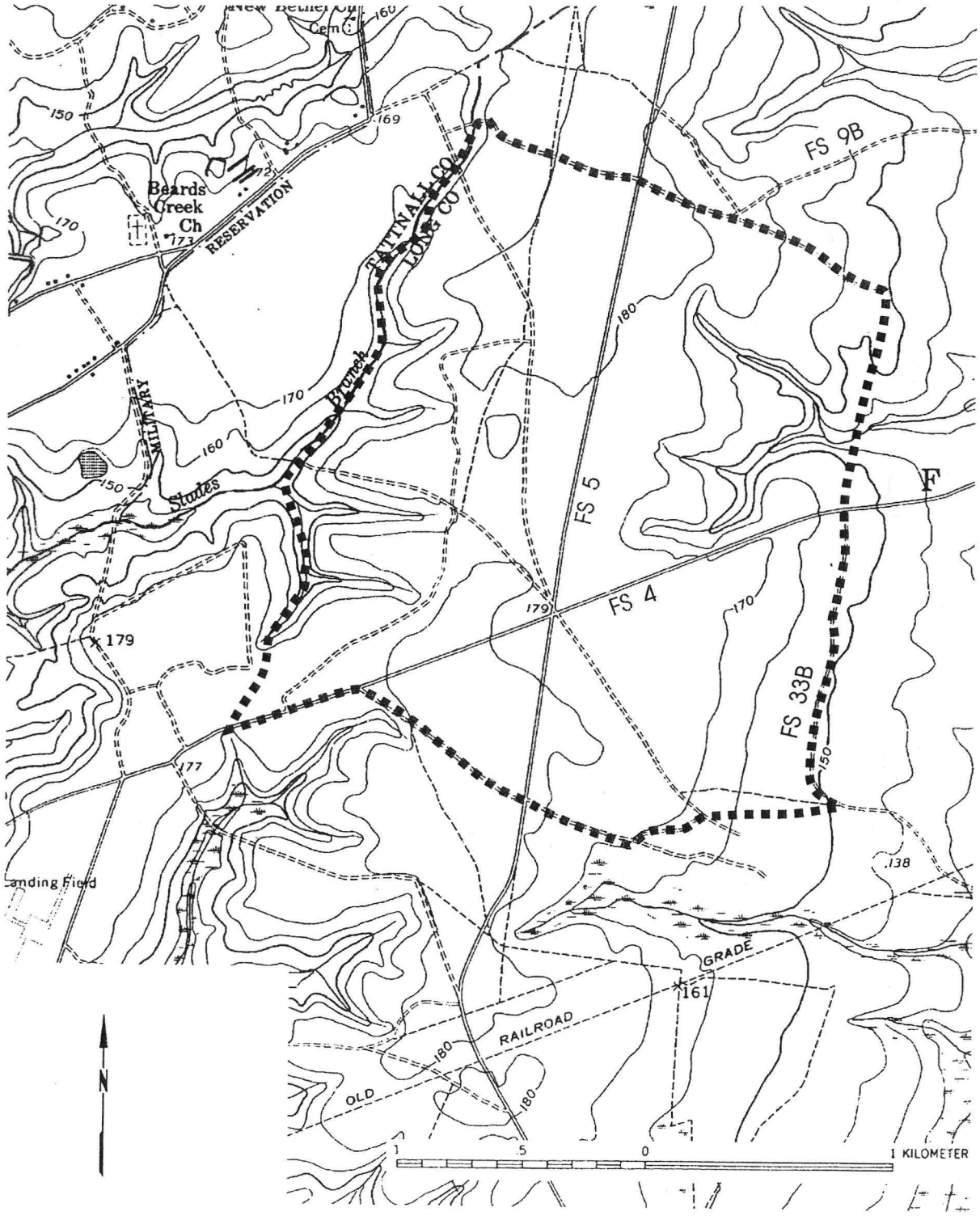


Figure 4. JAECK Drop Zone survey tract, showing boundaries and major roadways (base map is USGS Glennville, 1958PR73, 1:24,000).

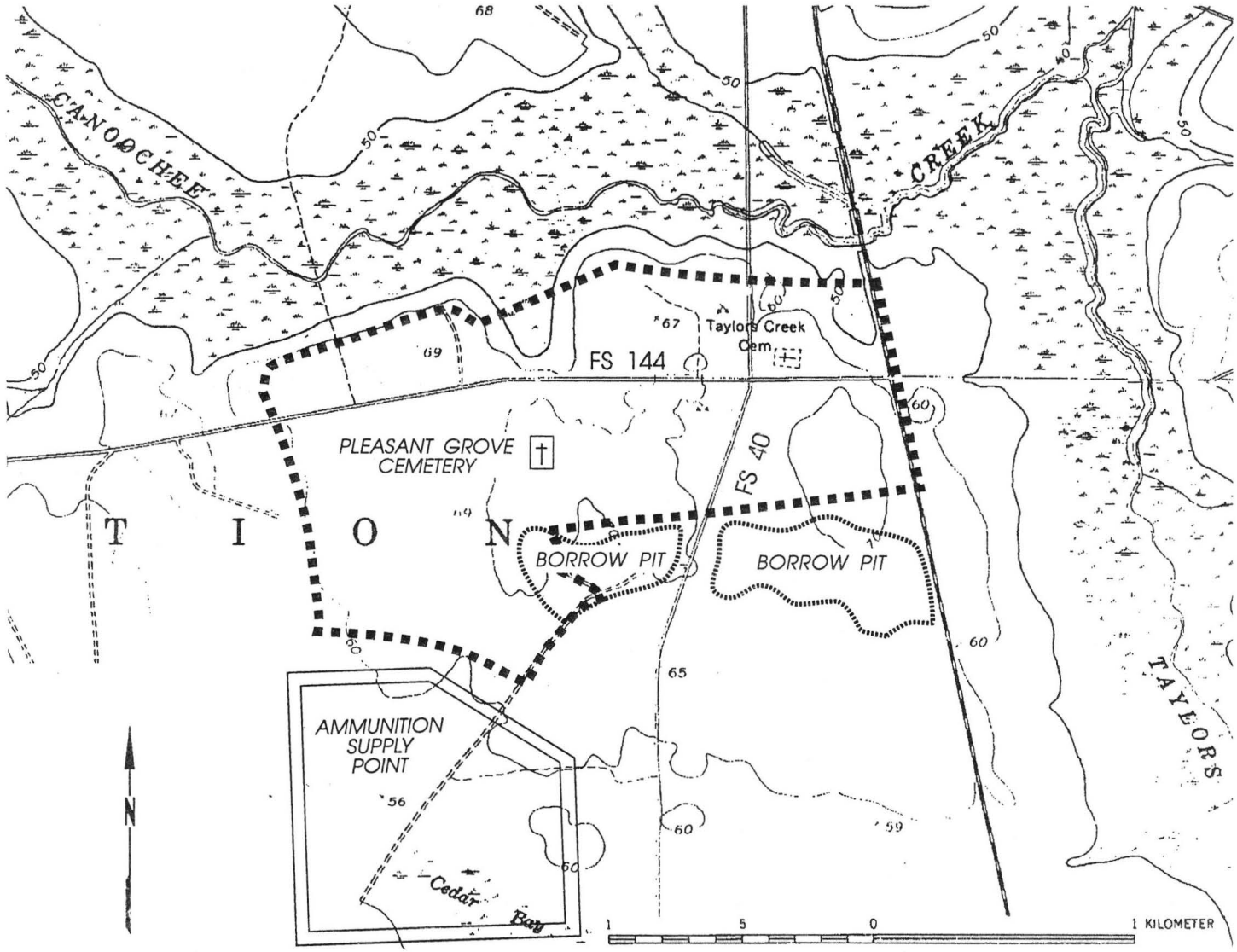


Figure 5. Taylors Creek survey tract, showing boundaries and major roadways (base maps is USGS, Taylors Creek, 1958PR73, 1:24,000).

exception is that of contours on site maps. These measurements, taken from United States Geological Survey maps, are in feet.

These investigations incorporated a review of sites located within the survey areas by Fort Stewart's Consulting Archaeologist David McKivergan and Thomas J. Pluckhahn and are on file with the Georgia State Archaeological Site Files, located in Athens, Georgia. A total of two prehistoric and historic archaeological sites were previously recorded by McKivergan within the JAECK Drop Zone survey area. A total of three prehistoric and historic archaeological sites were previously recorded by Pluckhahn and McKivergan for the Taylors Creek survey area, including the townsite of Taylors Creek. In addition, Fort Stewart's Historic Preservation Plan (Thomas et al. 1995) was consulted concerning sites or structures on the National Register of Historic Places within each specific area. Other than those recorded by the base's Consulting Archaeologist David McKivergan and Thomas Pluckhahn, none were found. Historic and ethnographic background research was conducted within the town of Hinesville, Georgia. Published reports regarding previous surveys conducted were also consulted.

Prehistoric and historic sites were located in both survey areas. A total of 11 sites were identified within the JAECK Drop Zone (9LG26, 9LG31/9LG46, 9LG44, 9LG45, and 9LG47) and the Taylors Creek area (9LI307, 9LI311, 9LI357, 9LI358, 9LI359, 9LI362). Also identified were 12 isolated occurrences (defined as fewer than five artifacts in a 20 m diameter area) — 9LG50 - 9LG61.

Of the archaeological sites identified, none are recommended as eligible for inclusion on the National Register of Historic Places. Three sites, 9LI357, 9LI362, and 9LG47, are recommended as potentially eligible. Two (9LG362 and 9LG47) are situated partially off the survey tract and could not be fully assessed. One (9LG357) requires additional unit excavations in order to determine eligibility. The remainder of the sites and isolated occurrences are recommended as not eligible.

Table 1.
Metric Equivalents

LENGTH		
kilometer	km	0.62 miles
meter	m	39.37 inches or 3.28 feet
centimeter	cm	0.39 inches
millimeter	mm	0.04 inches
AREA		
hectare	ha	2.47 acres
square km	km^2	0.3861 square miles
WEIGHT		
metric ton	t	1.1 English tons
TEMPERATURE		
C to F = (°C x 1.8) + 32 = °F		

Prehistoric sites included 9LG26, 9LG44 and 9LG45 in the JAECK Drop Zone and 9LI307, 9LI357, 9LI358, 9LI359, and 9LI362 in the Taylors Creek area. Historic site locations included 9LG31/9LG46 and 9LG47 in the JAECK Drop Zone and 9LI311 in the Taylors Creek area. Site 9LI311 is the overall designation given for the historic community of Taylors Creek and includes a number of inter-related dispersed farmstead house site locations within an 82 ha area. The prehistoric sites contained artifacts which temporally span the Early Archaic to Mississippian periods, as well as one artifact possibly from the early contact period. The three historic sites contained artifacts from the late eighteenth century to the twentieth century.

Surveys were conducted from December 10, 1995 to January 31, 1996, and the Principal Investigator for the project was Dr. Michael Trinkley. The Field Director for the project was Mr. William Barr. Field crew consisted of Mr. Ray Arbaugh, Ms. Kara Bridgman, Mr. William Davies, Ms. Sarah Greene, Ms. Martha J. Houston, Ms. Wendy Jordan, Mr. Hollis P. Lawrence, Mr. Troy O. Martin, Ms. Rozanna Pfeiffer, Mr. Shawn T. Small, and Mr. Phillip Quirk.

Curation

Archaeological site forms have been filed

with the Georgia Office of State Archaeology. The field notes, photographic materials, artifact catalogs, and artifacts resulting from these investigations have been curated at Fort Stewart using their accessioning and cataloging system. All records and duplicate copies have been provided to Fort Stewart and will be maintained by that institution in perpetuity.

NATURAL SETTING

Physiography and Drainage

Fort Stewart, which encompasses about 103,550 ha, forms a roughly rectangular shape measuring about 32 km north-south by about 56 km east-west. The fort's most distinctive feature is perhaps its lack of relief. Elevations range from about 50 m in the west to about 3 m in the east.

Located entirely within the Coastal Plain Province on the southeastern Atlantic coast of Georgia, this area is often referred to as the Atlantic Coast Flatwoods (Looper 1982:66). The coastal plain is best known for its featureless plains and marshes in the east. The flatwoods are characterized by their nearly level topography and poorly drained soils. The mostly sandy loam to sandy topsoils are underlain by marine sand, loams, or clays. The soils generally have high water tables and are often found to be unsuitable for a broad range of residential and industrial activities (Hodler and Schretter 1986:36). The area is also characterized by inlets and creeks draining an extensive system of drowned river systems and shallow marsh-filled coastal lagoons. The topography consists of subtle undulations in the landscape revealing the ridge and bay topography of the beach ridge plains (Mathews et al. 1980:137).

Fort Stewart is largely confined to what is often called the Barrier Island District — an area of slight to moderate dissection created by the advance and retreat of former sea levels. There are, as a result, six shoreline deposit complexes found parallel to the coastline in a step-like progression of decreasing elevations. This dissection has also resulted in marshes that exist in poorly drained lowlands. To the northwest are the Vidalia Uplands, a moderately dissected upland with a well developed dendritic stream pattern based on gravelly, clayey sands. The floodplains are typically narrow, except along the major rivers where wider, bordering swamps are often found (Hodler and Schretter 1986:17).

A number of relatively small streams and creeks, which are part of the Ogeechee River drainage system, make up Fort Stewart's drainage pattern. The Canoochee River is the main drainage for the base and flows west to east through the center of the reservation. A number of smaller tributaries such as Canoochee, Taylors, and Savage creeks flow into the Canoochee. The eastern boundary of Fort Stewart is defined by the Ogeechee River (Figure 6).

The two survey areas are situated in the southwest quadrant of the base. The Canoochee Creek, running east-west, is situated north of the study tracts, while Taylors Creek, also running east-west, is found to the south (Figure 6).

The 563.32 ha JAECK Drop Zone study area is located in Long County, Georgia. The 283.40 ha Taylors Creek survey area is located entirely in Liberty County.

While both are located in the same physiographic province, there are minor differences. Liberty County is bounded on the east by approximately 18 km of irregular Atlantic Ocean shoreline, separated from the ocean by Colonels and St. Catherines islands — both Pleistocene beach ridge plain islands separated from each other and the mainland by tidal creeks and inlets. Liberty County is bounded to the north west by Evans County, to the northeast and east by Bryan County, to the south by McIntosh County, and to the west by Long County. In contrast, Long County does not include any ocean frontage, instead being bounded to the north by Tattnall County, to the south McIntosh County, to the west-southwest by Wayne County, and of course to the east by Liberty County.

Modifications to the physical landscape of the JAECK Drop Zone survey area are minimal.

Figure 6. Surface waters of Fort Stewart (Adapted from Thomas et al. 1995:Figure 5).

In this area, landscape changes have been in the form of floods which deposited alluvial soils and the introduction of pre-World War II farm machinery. Landscape modifications in the Taylors Creek survey area are severe in some areas and less severe in others. The central core area of Taylors Creek has been heavily impacted by heavy machinery. The remainder of the area has been impacted by farming as well as other modifications related to military operations, borrow pits, and pond construction. It is possible that some sites, which today are found far from flowing water, may have had springs or minor creeks which flowed much closer to the site. A good example is the series of three prehistoric sites discovered during the 1995-1996 survey. Each of these sites (9LI357, 9LI358, 9LI359) were likely occupied during the Woodland or Mississippian periods. They are all located along a slight terrace overlooking a drainage rim. Today, the southern edge of Pond 4 literally laps at these sites. Considering the density and length of occupation at these sites, it is possible that Pond 4 eliminated from view a channeled source of water near this terrace.

Geology and Soils

The surface geology of Fort Stewart and the Hunter Army Airfield is dominated by sediments of Quaternary age (Hodler and Schretter 1986:12-13). Sand, silts, and clays originally derived from the Appalachian Mountains and the interior Piedmont are organized into coastal fluvial and aeolian deposits which virtually blanket the Coast. These sediments were transported seaward and deposited during the Quaternary period. Underlying the surface sediments are bedrock sedimentary strata of Tertiary and Mesozoic age which are almost uniformly eroded and variously lithified (Mathews et al. 1980:2).

The Mesozoic and Tertiary sedimentary rocks are infrequently exposed, usually in river banks and bottoms, in deep tidal channels, and in man-made quarries.

Of perhaps greatest significance in this discussion of coastal geology is an overview of chert resource. While agate, chalcedony, and jasper were also used by prehistoric groups, these materials occur in Georgia in very small amounts (Ledbetter et al. 1981:1-2), especially when compared to chert (Goad 1979:2). Chert, on the other hand, while occurring discontinuously, is present throughout the Coastal Plain, primarily associated with Paleozoic and Tertiary Period limestones. Georgia chert may range from black or brown through white, yellow, gray, and cream, depending on the various chemical impurities. Some will be fossiliferous.

While the Piedmont contributes a broad range of volcanic and metavolcanic materials important to prehistoric occupants, and may even contribute small quantities of jasper-like and agate material (Goad 1979:5), chert is found primarily in the Ridge and Valley Province in the extreme northwestern corner of the state and the Coastal Plain. Ledbetter and his colleagues note that chert-like materials may also occur "spottily" in the 20 km wide "hinge zone" between the Towaliga-Hartwell Fault and the Middleton Lowndesville Fault in the Inner Piedmont of Georgia (Ledbetter et al. 1981:6).

Goad reports that the major occurrences of chert in Georgia Coastal Plain are found associated with Tertiary Period formations, primarily from Eocene and Oligocene Epoch deposits (although other sources were sporadically used). She observes that, "the major occurrences of Coastal Plain chert are in southwestern Georgia, west of the Flint River, along the Fall Line, and in southeast Georgia along the Savannah River below Augusta" (Goad 1979:19). It may be found as residual nodules and boulders, scattered along streams and ridges, or as cropping beds. She also notes that while the different strata have recognizable chert forms, the range in variation is much greater in the Coastal Plain than in the Ridge and Valley area. This makes the identification of specific point sources more difficult and less reliable (Goad 1979:24).

Sources have been identified from Baker, Bibb, Burke, Calhoun, Crisp, Decatur, Dooly, Dougherty, Early, Grady, Houston, Jefferson, Laurens, Lee, Macon, Miller, Mitchell, Pulaski, Randolph, Richmond, Screven, Seminole, Stewart, Sumter, Thomas, Twiggs, Quitman, Washington,

and Worth counties (Goad 1979:81-88). The closest sources are situated in Screven County, about 100 km from the study area and appear to be Eocene/Oligocene boulders and materials associated with Briar Creek. Some of this material ranges from black or tan to red, yellow, cream and white. It has a dull luster and is grainy. The chert is fossiliferous and, when heated, it resembles the Claiborne Stage cherts in color and texture. Other materials include dark grays, slate blacks, clears, creams, browns, whites, and blue-whites or mottled colors. Textures can range from smooth to grainy, although all are fossiliferous with a dull, soft luster. Heat treatment produces a glossy surface with yellow to dark red colors (Goad 1979:23-24).

In nearby Burke County cherts are associated with deposits of the Claiborne Group of the Eocene Epoch. These cherts range from red, yellow, cream, and blue to mottled or stripped. They typically have a dull sheen and are heavily fossiliferous. When heat treated the material may be pink, dark red, or even bright orange. The fossil inclusions turn white, giving the chert a "spotted" appearance. Porous flints, jasper, and chalcedony are also present with the cherts in these deposits (Goad 1979:21).

In Laurens County, about 150 km to the northwest, are cherts of the Oligocene Epoch. This chert is typically dense, compact, vitreous, and ranges in color from translucent to red, yellow, or brown. There are few fossil inclusions. Heat treated specimens are typically glossy and red or deep brown. Occasional jasper nodules are associated with the chert (Goad 1979:24).

The geomorphology of the area is greatly influenced by the raising and lowering of the sea during the Pleistocene and (to a somewhat lesser extent) the Holocene epochs. Glaciers repeatedly advanced and retreated in the northern portions of the United States. While these ice masses did not extend southward to Georgia, they nevertheless dramatically affected the area's geology by influencing the ocean levels which generated a series of marine terraces (Hodler and Schretter 1986:27; Looper 1982:2-3; Thomas et al. 1995:46).

Fort Stewart incorporates portions of the Sunderland, Wicomico, Penholoway, Talbot, and Pamlico terraces which range in elevations from 52 m above mean sea level (amsl) to 8 m amsl (Hodler and Schretter 1986:27; Thomas et al. 1995:46-50). In contrast, Hunter Army Airfield is situated at the edge of the Princess Anne and Pamlico terraces and partially on a barrier island facies (Thomas et al. 1995:47).

Today, modern soil science identifies 13 general soil series in Long County and 11 in adjacent Liberty County. Overall, the soil profiles of both Long and Liberty counties exhibit characteristics of soil that is "moderately well drained and somewhat poorly drained soils on ridges, and by poorly drained and very poorly drained soils on flood plains and in broad low areas, depressions, marshes, and drainageways" (Looper 1982:1). Of the 24 general unit descriptions two are found in both survey areas of Fort Stewart — the Stilson-Pelham-Fuquay Association and the Ocilla-Riceboro-Pooler Association. The former is characterized by well drained to poorly drained soils on nearly level to very gently sloping surfaces while the latter is characterized by somewhat poorly to poorly drained soils commonly found on low lying upland ridges (Looper 1982).

The JAECK Drop Zone survey area in Long County is characterized by Albany, Blanton, Echaw-Centenary, Ellabelle, Fuquay, Leefield, Lucy, Mandarin, Mascotte, Ocilla, Osier-Bibb, Pelham and Stilson soils. These soils change significantly from west to east across the project area. The most prominent soil type west of Fort Stewart Road 4 is moderately drained Blanton sand. The other soil types in the western section of the JAECK Drop Zone are the somewhat poorly drained Albany loamy fine sand, the very poorly drained Ellabelle loamy sand, the moderately well drained Eschaw-Centenary fine sand, the somewhat poorly drained Mandarin fine sand, the well drained Fuquay and Lucy loamy sand, the poorly drained Osier-Bibb soil, and Pelham loamy sand.

The most prominent soil types east of Fort Stewart Road 5 are the Ellabelle, Echaw, and Centenary soils. The other soil types within the

eastern section of the JAECK Drop Zone are the somewhat poorly drained Albany loamy fine sand, the moderately drained Blanton sand, the somewhat poorly drained Leefield loamy sand, the poorly drained Mascotte fine sand, the somewhat poorly drained Ocilla loamy fine sand, the poorly drained Pelham loamy sand, and the moderately well drained Stilson loamy sand.

The Taylors Creek survey area in Liberty County is characterized by Albany, Blanton, Fuquay, Leefield, Ocilla, Pelham and Stilson soils. These soils change gradually from north to south across the project area. The most prominent soil types within the Taylors Creek survey area are Leefield and Stilson soils. The other soil types in the Taylors Creek survey area are the somewhat poorly drained Albany loamy fine sand, the moderately well drained Blanton sandy loam, the well drained Fuquay loamy sand, the somewhat poorly drained Leefield loamy sand, the somewhat poorly drained Ocilla loamy fine sand, the poorly drained Pelham loamy sand, and the moderately well drained Stilson loamy sand.

Since the effects of erosion and soil deposition characteristics are important in determining site probability within the confines of Fort Stewart, typical soil profiles as described by Looper (1982) are briefly discussed below. The occurrence of these soils in the survey tracts are also shown in Figures 7 and 8.

The **Albany Series** are characterized by somewhat poorly drained soils with a 0 to 2% slope. The water table for the Albany series fluctuates between 30 cm and 76 cm in winter and early spring. Albany series soils exhibit a multiple A horizon. The A1 horizon at approximately 20 cm in depth is a very dark gray (10YR3/1) loamy fine sand. From 20 cm to a depth of 66 cm is an A22 horizon of light brownish gray (2.5YR6/6) fine sand. The A22 horizon to a depth of 124 cm, is a hard and compact brownish yellow (10YR6/6) sandy clay loam. Below this, to 1.37 m, is the B1 horizon a yellowish brown (10YR5/6) sandy clay loam with a number of medium distinct light gray (10YR6/1) and olive yellow (2.5Y6/6) mottles. The B21t horizon extends to 1.57 m. A mottled yellowish brown (10YR5/6) sandy clay loam this horizon also contains light gray (10YR6/1), an olive yellow (2.5Y6/6), and a yellowish red (5YR5/8) soil. The B22t horizon, which extends over 2 m below the surface, typically contains mottled light brownish gray (10YR6/2), brownish yellow (10YR6/6), and yellowish red (5YR4/8) soils.

The **Bibb Series**, characterized by Bibb sandy loam in association with a 0 to 2% slope, exhibits two A horizons. The A11 horizon dips to about 13 cm and consists of very dark gray (10YR3/1) sandy loam. From 13 cm to 33 cm there is an A12g horizon of dark grayish brown (10YR4/2). There is no B horizon. The C horizon consists of a gray (10YR5/1) sandy loam. The water table for the Bibb series fluctuates between 15 cm and 46 cm below surface in winter to the middle of spring.

The **Blanton Series** consists of moderately well drained soils that have a 0 to 3% slope. The water table in the Blanton series fluctuates between 1.52 m to 1.83 m in winter to the middle part of spring. The Ap Horizon, where present, is approximately 0 to 20 cm in depth and consists of a dark grayish brown (10YR4/2) loamy sand. From 20 cm to 81 cm is an A21 horizon of yellowish brown (10YR5/4) sand. The A22 horizon extends 1.17 m below surface and contains a yellowish brown (10YR5/6) sand. The B21t horizon, at 1.30 m below surface, is a light yellowish brown (10YR6/4) sandy loam. The B22t horizon, at 1.68 m below surface, is a strong brown (7.5YR5/6) sandy clay loam with common medium prominent red (2.5YR5/8) mottles. The B23t horizon extends approximately 2 m in depth, and includes mottled brownish yellow (10YR6/6), light gray (10YR7/2), and yellowish red (5YR4/6) sandy clay loams.

The **Centenary Series,** similar to Echaw and Mandarin soils, are moderately well drained with a 0 to 2% slope. The water table fluctuates between depths of 1.06 m and 1.52 m in winter and early spring. The A1 horizon is a dark gray (10YR4/1) fine sand which extends 0 to 13 cm below the surface; A21 is a light yellowish brown (10YR6/4) fine sand and extends from approximately 13 to 63 cm below surface; A22 is a very pale brown (10YR7/3) fine sand which extends

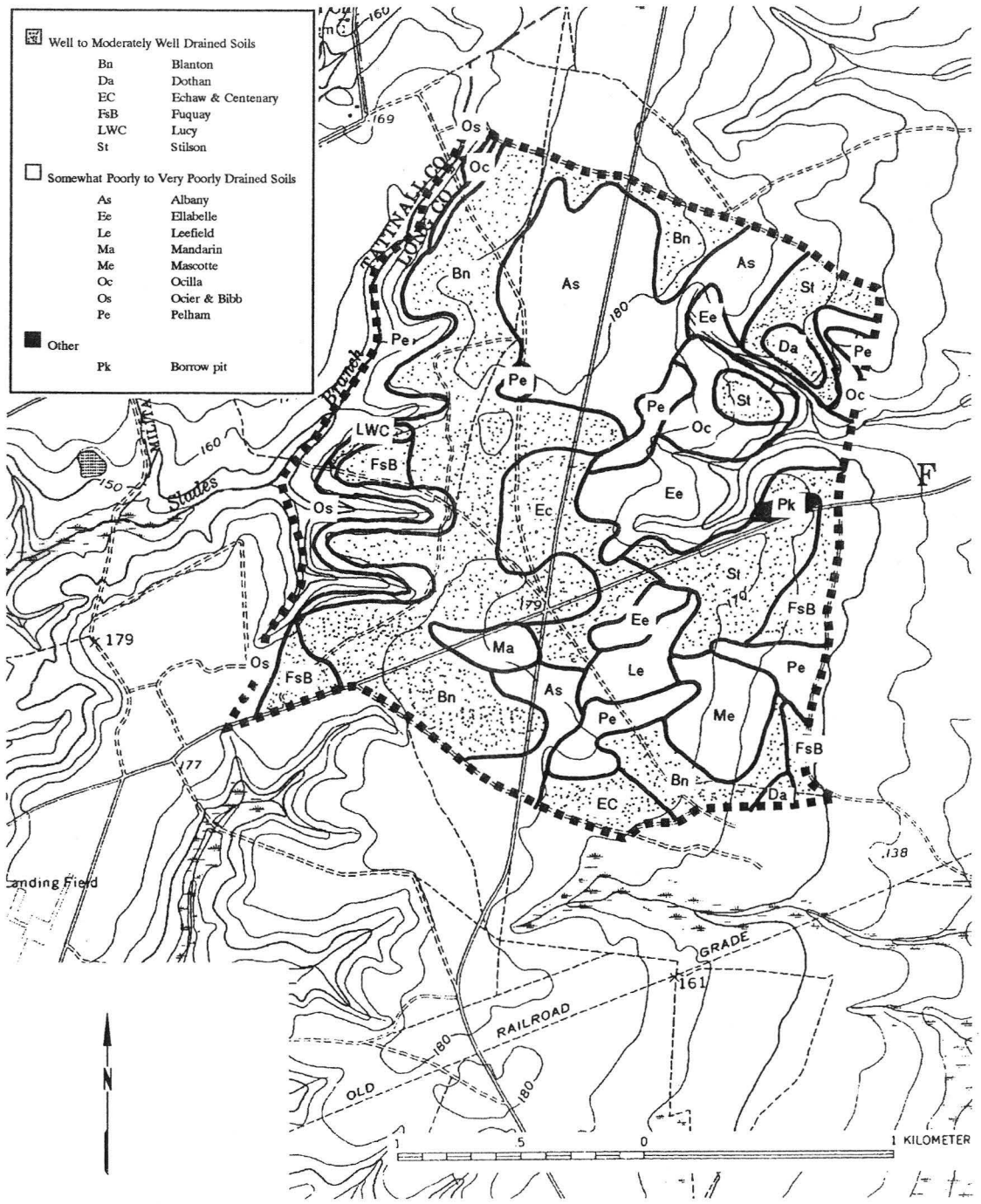


Figure 7. Soils of the JAECK Drop Zone survey tract (adapted from Looper 1982).

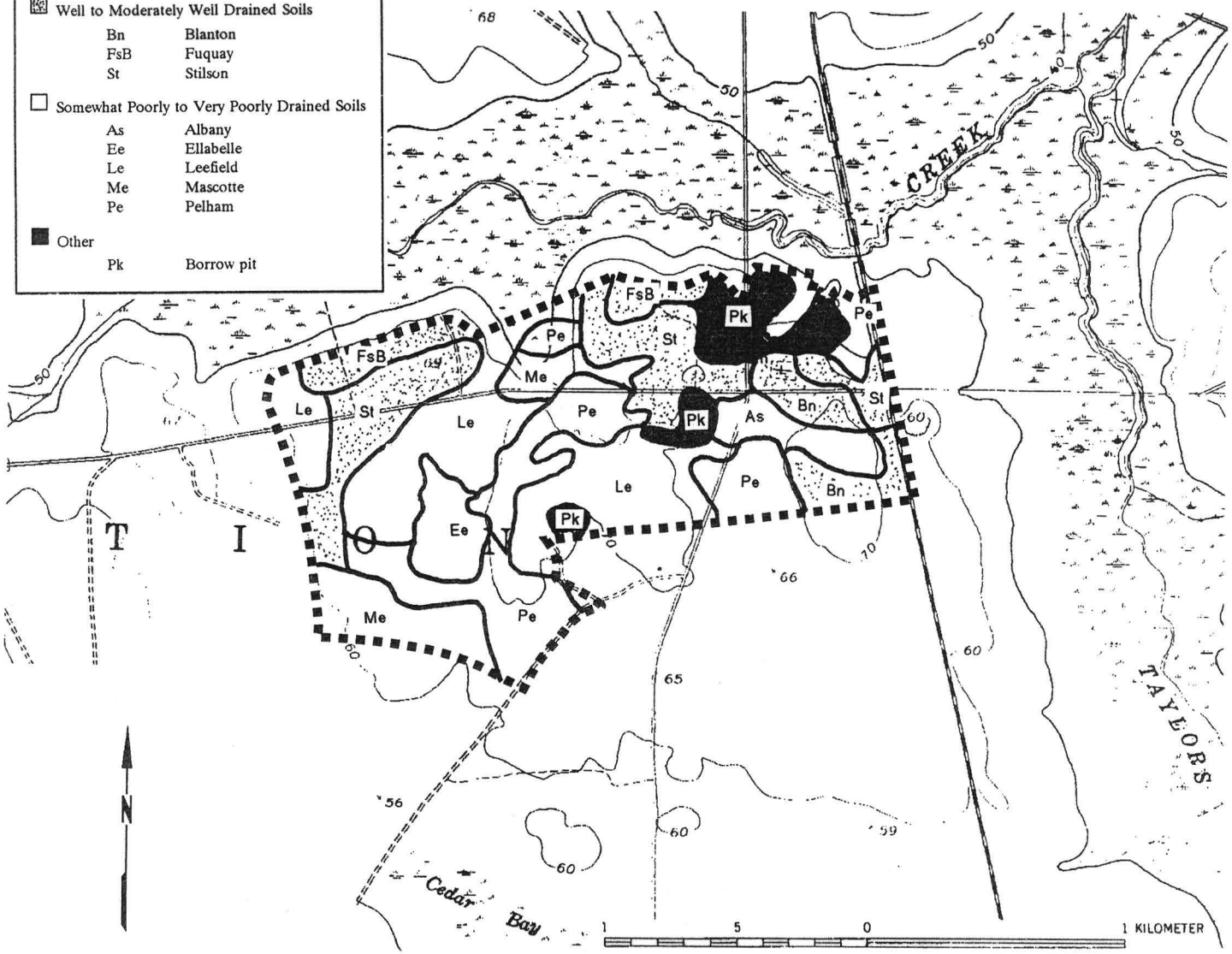


Figure 8. Soils of the Taylors Creek survey tract (adapted from Looper 1982).

from 63 cm to 1.07 m; and A23 is a light gray (10YR7/1) fine sand with fine faint yellowish mottles. The B horizon is composed of two levels. B1h extends from 1.07 m to 1.82 m below surface, and is a dark brown (7.5YR3/2) loamy sand. Horizon B2h is a very dark brown (10YR2/2) loamy sand that ranges from 1.83 m to 2.03 m below surface.

The **Echaw Series** consist of soils that are moderately well drained and may have slopes from 0 to 2%. The water table for the Echaw series ranges between 76 cm to 1.52 m below the surface in winter and early spring. A typical Echaw sand, with a 0 to 2% slope will have an A1 horizon of very dark gray (10YR3/1) fine sand to a depth of 13 cm. The A21 horizon is brownish yellow (10YR6/6) fine sand between 13 cm and 38 cm below surface. The A22 horizon is 38 cm to 91 cm deep and is a very pale brown (10YR7/3) fine sand. The last A horizon, A23, is 91 cm to 1.19 m deep with light gray (10YR7/2) fine sand with medium faint pale brown (10YR6/3) mottles in the lower part. Underlying the A horizon are two B horizons. Horizon B21h ranges from 1.19 m to 140 cm in depth and is a dark reddish gray (5YR4/2) fine sand. The B22h horizon is a dark reddish brown (5YR3/2) fine sand that ranges from 1.40 m to 1.78 m below surface.

The **Ellabelle Series** has very poorly drained soils with a slope of 0 to 2%. "The soil is commonly ponded in wet seasons" (Looper 1982:63) but is generally stationary at 30 cm below surface from late fall to middle spring. This series contains only one A horizon, A1, which extends 58 cm below the surface. This soil is a black (10YR2/1) loamy sand, suggestive of extensive chemical reduction. Underlying the A horizon are three B horizons. Horizon B1g extends from 58 cm to 79 cm and is a dark gray (10YR4/1) sandy loam. Horizon B21tg is composed of a gray (10YR5/1) sandy loam with fine distinct yellowish brown (10YR5/6) and strong brown (7.5YR5/6) mottled soils. The B22tg horizon is a mottled gray (10YR5/1), brownish yellow (10YR6/6), and strong brown (7.5YR5/6) sandy clay loam.

The **Fuquay Series** has well drained soils that commonly have a slope from 0 to 5%, The Ap horizon is usually dark grayish (10YR4/2) loamy sand to 22 cm. Below the Ap soils, to a depth of 74 cm, is the A2 horizon characterized by brownish yellow (10YR5/6) loamy sand. The B1 horizon, to a depth of 84 cm, consists of a brownish yellow (10YR6/6) sandy loam with a few medium distinct strong brown (7.5YR5/8) mottles. This is followed by the B21t horizon which ranges to a depth of 1.04 m and is a brownish yellow (10YR6/6) sandy clay loam with a common medium distinct strong brown (7.5YR5/8) and yellowish red (5YR5/8) mottles. The B22t horizon is a mottled brownish yellow (10YR6/6), strong brown (7.5YR5/6) and red (2.5YR5/8) sandy loam that runs to 1.17 m in depth. Horizon B23t extends to 1.93 m and is a mottled strong brown (7.5YR5/6), light brownish gray (10YR6/2), and red (2.5YR4/8) sandy loam.

The **Leefield Series** generally have somewhat poorly drained soils and a slope of 0 to 2%. The water table ranges from 46 cm in the winter to 76 cm in the early spring. The Leefield series contains two A horizons and four B horizons. The A1 horizon extends down 28 cm and is a very dark gray (10YR3/1) loamy sand, while the A2 horizon ranges from 28 cm to 56 cm in depth and is a light yellowish brown (10YR6/4) loamy sand. Underlying the A horizon is B1 which is a light yellowish brown (10YR6/4) sandy loam with common medium distinct yellowish brown (10YR5/6) and strong brown (7.5YR5/8) mottles and common fine light gray mottles. Horizon B21t ranges from 56 cm to 97 cm and is a light yellowish brown (10YR6/4) sandy clay loam with a common medium distinct yellowish brown (10YR5/6) and light gray (10YR7/2), with strong brown (7.5YR5/8) mottles. The B22tg horizon extends to 1.47 m below the surface and is a light gray (10YR7/1 sandy clay loam with common coarse distinct yellowish brown (10YR5/6) and strong brown (7.5YR5/8) mottles with a few prominent yellowish red mottles.

The **Lucy Series** typically have well drained soils on a slope of 2 to 12%. The Lucy series contains three A horizons and four B horizons. The A1 horizon extends down 10 cm and is a very dark grayish brown (10YR3/2) loamy sand. The A21 horizon ranges from 10 cm to 28

cm in depth and is a light yellowish brown (10YR6/4) loamy sand. Horizon A22 averages 28 cm to 61 cm below surface and is a yellowish brown (10YR5/4) loamy sand. Underlying the A horizon is B1, a yellowish red (5YR5/6) sandy loam. Horizon B22t ranges from 74 cm to 91 cm and is a yellowish red (5YR5/6) sandy clay loam with common medium distinct strong brown (7.5YR5/6) mottles, along with light gray (10YR7/2), and strong brown (7.5YR5/8) mottles. The B23tg horizon extends to 1.90 m below the surface and is a yellowish red (5YR5/6) sandy clay loam with common medium distinct strong brown (7.5YR5/6) and pale brown (10YR6/3) mottles with a common fine distinct red (10YR4/6) mottling.

The **Mandarin Series** are somewhat poorly drained soils with slopes ranging from 0 to 2%. The water table for Mandarin soils ranges from 46 cm in summer to 1.07 m in the winter. Mandarin series soils contain three A horizons with two re-occurrences and three B horizons with one re-occurrence. The A1 horizon extends to 18 cm below surface and is a dark gray (10YR4/1) fine sand. The A21 horizon is a gray (10YR6/1) fine sand and ends at 23 cm. The A22 horizon ranges from 23 cm to 31 cm below surface and contains a light brownish gray (10YR6/2) fine sand. Horizon B21h is a very dark brown (10YR2/2) fine sand ranging to 41 cm below surface. B22h ends at 50 cm and is a very dark grayish brown (10YR3/2) fine sand. Horizon B3 extends to 61 cm below surface and is a brown (10YR5/3) fine sand. The re-occurrence of the A horizon extends from 61 cm to 1.14 m deep. The A'21 horizon is a light brownish gray (10YR6/2) fine sand and the A'22 horizon, beginning at 91 cm, is a light gray (10YR7/2) fine sand with common medium distinct yellow (10YR7/6) mottles. Horizon B'2h concludes at 1.83 m below surface and is a dark brown (7.5YR3/2) fine sand with common medium distinct black (10YR2/1) and distinct black (10YR2/1) mottles.

The **Mascotte Series** consists of poorly drained, moderately permeable soils with slopes ranging from 0 to 2%. The Mascotte series water table ranges from surface water to a depth of less than 31 cm in summer and winter. Mascotte series soils contain two A horizons with one re-occurrence and two B horizons with two re-occurrence. The A horizon extends to 15 cm below surface and is a very dark gray (10YR3/1) fine sand. The B2h horizon is a very dark brown (10YR2/2) fine sand in the upper part and dark reddish brown (5YR3/2) fine sand in the lower part. The B3 horizon ranges from 46 cm to 53 cm below surface and contains a pale brown (10YR6/3) fine sand with common medium distinct dark brown (10YR3/3) mottles. Horizon A'2 is a light gray (2.5YR7/2) fine sand with common coarse distinct light yellowish brown (10YR6/4) mottles ranging to 81 cm below surface. B'21tg ends at 1.22 m and is a light gray (10YR7/1) sandy clay loam with many coarse prominent yellowish brown (10YR5/8) mottles which contain few medium prominent red (2.5YR4/6) mottles. Horizon B'22t extends to 1.78 m below surface and is a mottled light gray (10YR7/1), yellowish brown (10YR5/8), and red (2.5YR4/6) sandy clay loam.

The **Ocilla Series** soils consist of somewhat poorly drained soils that have a slope of 0 to 2%. The water table in these soils fluctuates between a high point of 31 cm to 76 cm in depth. Ocilla series soils contain three A horizons and three B horizons. Horizon A1 extends to approximately 15 cm and is a dark grayish brown (10YR4/2) loamy fine sand. The A21 horizon extends to 53 cm in depth and is a pale brown (10YR6/3) loamy fine sand. The A22 horizon ranges from 53 cm to 86 cm and is a pale brown (10YR6/3) loamy sand with few faint yellowish brown mottles. Underlying the A horizon is the B1 horizon which extends to approximately 97 cm and is a yellowish brown (10YR5/6) sandy loam with common medium distinct light brownish gray (10YR6/2) mottles. Horizon B21t goes to 1.27 m in depth and is a yellowish brown (10YR5/6) sandy clay loam with common medium distinct light gray (10YR7/2) mottles and few medium distinct pale brown (10YR6/3) mottles. The B22t horizon levels off at 1.83 m below surface and is a mottled light gray (10YR7/2), yellowish brown (10YR5/6), and yellowish red (5YR4/8) sandy clay loam.

The **Osier Series** soils are poorly drained, rapidly permeable soils that have a slope of 0 to 2%. The water table stands between 30 cm or less. The A11 horizon reaches to 13 cm in depth and is

a dark grayish brown (10YR4/2) loamy sand. The A12 horizon extends to 28 cm and is a very dark grayish brown (10YR3/2) loamy sand. There is no B horizon in Osier series soils. The C1g horizon extends to 91 cm below the surface and is a light brownish gray (10YR6/2) loamy sand. Horizon C2g reaches 1.27 m and is a light gray (10YR7/2) sand and C3g is the same soil to a depth of 1.65 m.

The **Pelham Series** consists of poorly drained moderately permeable soils with a slope of 0 to 2%. The water table fluctuates between a high of 15 cm to a low of 46 cm. This series contains three A horizons and three B horizons. The A1 horizon goes to 15 cm below surface and is a black (10YR2/1) loamy sand, going to a grayish brown (10YR5/2) loamy sand in the A21 horizon down to a depth of 41 cm. The A22 horizon extends to 64 cm and is a gray (10YR6/1) sandy loam. The B1g horizon extends to 84 cm below surface and is a gray (10YR6/1) sandy loam with common medium distinct strong brown (7.5YR5/6) mottles. Horizon B21tg goes to 1.23 m below surface and is a gray (10YR5/1) sandy clay loam with common medium distinct brownish yellow (10YR6/6) and light yellowish brown (2.5YR6/4) mottles. The B22tg horizon extends 1.60 m below surface and is a gray (10YR6/1) sandy clay loam with common medium distinct brownish yellowish red mottles.

The **Stilson Series** are moderately drained soils with a slope from 0 to 2%. They have a water table that fluctuates between 76 cm and 91 cm. Stilson series soils contain two A horizons and five B horizons. The A1 horizon reaches to 15 cm in depth and is a dark grayish brown (10YR4/2) loamy sand. The A2 horizon extends to 74 cm and is a pale yellow (2.5YR7/4) loamy sand. Underlying the A horizon is a B1 horizon that is a brownish yellow (10YR6/6) that reaches to 89 cm. Horizon B21t extends 1.09 m in depth and is a brownish yellow (10YR6/6) sandy clay loam with common medium distinct strong brown (7.5YR5/8), red (2.5YR4/8), light gray (10YR7/2), and yellow (10YR7/6) mottles. The B22t horizon extends 1.55 m in depth and is a reticulately mottled brownish yellow (10YR6/6), light gray (10YR7/2), strong brown (7.5YR5/8), and red (2.5YR4/8) sandy clay loam. The B23tg horizon is a light gray (10YR7/1) sandy clay loam with common medium distinct brownish yellow (10YR6/6) and strong brown (7.5YR5/8) mottles and a few fine faint red mottles. Horizon B24tg reaches to 1.83 m in depth and is a reticulately mottled light gray (10YR7/1), red (10R5/8, and strong brown (7.5YR5/8) sandy clay loam.

Both of the prehistoric sites (9LG44 and 9LG45) found in the JAECK Drop Zone project area occur on Blanton soils. The two historic sites, 9LG46 and 9LG47, were found on Albany and Fuquay sands, respectively. Artifacts recovered from the three prehistoric sites in the Taylors Creek tract (9LI357, 9LI358, 9LI359) were all found on well drained Fuquay series soils. The primary historic site, the community of Taylors Creek (9LI311), encompasses the majority of the Taylors Creek survey area. Artifacts recovered from this extended site were primarily removed from soils of the Albany, Blanton, and Stilson series.

Although this is a very small sample, all five of the prehistoric sites were found on either moderately well or well drained soils (specifically Blanton and Fuquay series). The three historic sites suggest that a greater range of site characteristics may have been important, since they occur on well drained Fuquay, moderately drained Blanton and Stilson, and somewhat poorly drained Albany soils. Nevertheless, this is a very small sample and considerably more research is necessary.

Climate

The southeastern Atlantic coast of Georgia is usually hot and humid in the summer with a winter that is cool to occasionally bitter cold. Georgia's highest temperatures normally occur in July and, in the Fort Stewart area the summer average daily temperature is 80°F. The lowest temperature occurs in January and winter temperatures average 53° F. The average growing season in the Fort Stewart area ranges from about 260 to 270 days, while at Hunter Army Airfield the growing season may be as long as 290 days (Hodler and Schretter 1986:40).

Occasional tropical storms, coupled with the flow of moist air from the Gulf of Mexico over the warm land surface, make the late summer the season of greatest rainfall in southeastern Georgia, while November is typically the month of lowest rainfall for the project area (Clemens 1989:53; Hodler and Schretter 1986:38). The total annual precipitation is 1.25 m. Of this, 60% usually falls from April through October, which includes the growing season for most crops (Looper 1982:2). During 1954, one of the driest years on record, the rainfall for the project area was only about 70 cm — about 55% of the normal rainfall. Thomas et al. (1995:9) suggest that floods are actually more common, typically occurring in the winter and spring. The flood-producing rains are usually caused with slow-moving low pressure centers and may be associated with tropical storms or prolonged thunder storm activity.

During the late Pleistocene and early Holocene periods temperatures were considerably cooler than they are today. Temperatures began to moderate and approach modern temperatures along the Southeast Atlantic Slope around 7,000 B.P. (Wright 1976:594). A more thorough discussion is provided below relating vegetational change to these climatic ranges.

Floristics and Paleoenvironment

The Coastal Plain in the vicinity of Fort Stewart is today dominated by longleaf-slash pines with oaks and yellow poplar being found as common associates (Hodler and Schretter 1986:52; Shantz and Zon 1936:5). Although such forests of large, equal-age pines were noted by explorers in the seventeenth century, this vegetation is largely the result of intentional action by humans. Described as a fire subclimax forest, these monospecific stands are maintained by periodic burning which exclude the young of most other arboreal species.

Küchler (1964) identifies the potential natural vegetation, that expected without the interference of humans, as a Southern Mixed Forest. These are tall forests of broadleaf deciduous and evergreen and needleleaf evergreen trees. The dominants are beech, sweet gum, southern magnolia, white oak, and laurel oak. Slash and loblolly pines are also dominants, although they would not be as prevalent as they are in today's fore subclimax setting. Other components include maples, hickories, dogwood, and palmetto (Küchler 1964:112). Along the major drainages Küchler identified Southern Floodplain Forests — dense, medium tall to tall forests of broadleaf deciduous and evergreen trees an shrubs and needleleaf deciduous trees such as tupelo, oak, bald cypress, along with maples, hickories, ash, sweet gum, oaks, and elm (Küchler 1964:113).

Today, suggestions of these potential natural forests are found only in more mesic, edaphically favorable and fire-protected areas (Thomas et al. 1995:20). In such areas, drainage, soil types, elevation, and slope are the major factors affecting vegetation and a range of different species, including live oaks, hickories, palmettoes, hollies, and bays will be found.

Today, the JAECK Drop Zone and Taylors Creek area are both heavily managed. They are dominated by open pine forests with very sparse understory vegetation (Figures 9 and 10).

In the 1860s less than 30% of what would later become Liberty and Long counties (but known at that time as Liberty County) was improved for cultivation (Hilliard 1984:Map 44). By the 1940s only about a third of these two counties was cropped with most of the land being forested (Hodler and Schretter 1986:127). At the time Fort Stewart was acquired by the U.S. Army, Thomas et al. (1995:8) report that most of the plots were small to medium size; most being woodlots. Today, about 20% of Liberty and Long counties is farmland, with about 13% actually under cultivation (Clements 1989:251, 255). Cotton and rice were historically produced on the bottomlands (Thomas et al. 1995:130-131). By the late antebellum there seems to have been a focused shift to small tracts of peas, sweet potatoes, and corn. Rice was largely abandoned by 1860 and cotton was little more than a subsidiary interest (Thomas et al. 1995:159-160). By the postbellum cotton and corn were still common, although potatoes, oats, cane, peaches, figs, grapes, and pecans were also being grown, at least in small

Figure 9. Typical vegetation and survey conditions in the JAECK Drop Zone survey tract.

quantities (Knight 1917:1256). Lumber and live stock were also growing industries. Today the principal agricultural activity is ranching, while the principal crops are corn and soybeans. Logging remains a substantial economic activity (Clements 1989:251, 255).

Naval stores have, historically, played a major part of Georgia's Coastal Plain economy since the nineteenth century (Thomas et al. 1995:130). Obtained by heating the rosin-filled heartwood of pine logs, pitch and tar were replaced as major exports by turpentine and rosin. These products are distilled from the raw gum exuded by living pine trees. Growing through the late antebellum and early postbellum, Georgia dominated U.S. gum production, accounting for about 50% by the 1890s. It lost considerable ground to adjacent Florida in the next four decades, but recovered its lead in the late 1930s and early 1940s. In 1970, Georgia contributed about 85% of the U.S. gum naval store production, although

Figure 10. Typical vegetation and survey conditions in the Taylors Creek survey tract.

the significance of the gum market has declined dramatically in the twentieth century as the tall oil or sulfate production increased. Exacerbating the situation is a continuing severe labor shortage brought about by the low wages, the seasonal nature of the work, and its focus on hot and dirty manual labor (Hodler and Schretter 1986:148).

Pollen cores obtained from the Southeast Coastal Plain indicate a sequence of successional forest types from the Full Glacial through the Post Glacial periods (Watts 1971; Whitehead 1965). Before strong evidence of human population (pre-15,000 B.P.), cold-adapted vegetation predominated by spruce and jack pine was found in the Piedmont and Coastal Plain area. Other less common species included oak and ironwood. All of these species suggest a much colder and drier environment than found today (Watts 1980:326). Some have suggested that this climate was much like today's eastern Canadian boreal forests, dominated by pine and spruce distributed in a mosaic pattern of stands within sedge-dominated prairies. Thomas et al. (1995:62), however, also present evidence suggesting that while the climate was colder, it may *not* have been drastic enough to support a full boreal forest.

The somewhat warmer and moister environment evidenced in the Late Glacial (15,000 to 10,000 B.P.) is associated with an increase in deciduous species. Northern hardwoods, such as oak, hickory, beech, birch, and elm began replacing the spruce and jack pine populations. This change corresponds with warmer summer temperatures and colder winter temperatures as well as an increase in precipitation. It is during this period that there is the first moderately well documented evidence for human occupation (Watts 1980; Sassaman et al. 1990). This period was a transitional period between the glacial Late Pleistocene and the essentially modern climatic conditions of the Holocene. The resulting mesic forest, with its relatively high percentages of beech and hickory, has no modern analog and was the result of the cool, moist conditions which characterized this transition.

During the Post Glacial (10,000 B.P. to present) oak and hickory dominated the region. Other species such as walnut, hemlock, and hazelnut disappeared from the pollen record. By 9,500 B.P. hickory and ironwood species declined and were replaced by sweetgum and blackgum. These changes prior to 7,000 B.P. suggest periods of rapid warming and increased moisture (Watts 1980; Watts and Stuiver 1980). It has been observed that these very rapid environmental changes would have created a dynamic ecosystem requiring constant adaptive adjustments on the part of early groups (Cable and Mueller 1980:7).

In the Georgia Coastal Plain southern pine communities displaced the oak-dominated forests between 8,000 and 6,000 B.P. which led to a decrease in mast production (Sassaman et al. 1990:22; Thomas et al. 1995:63-64). This vegetational change probably had an effect on prehistoric land use during certain times of the year, since nut masts were probably more isolated and concentrated rather than widespread. Coupled with these vegetational changes was a cooler, moister climate (Watts 1971 and 1980).

Thomas et al. (1995:64) suggest a possible cause and effect relationship between climate changes beginning about 8,300 B.P. and the rise of pine forests. They note that as the climate shifted from less rainfall to a seasonably variable moisture regime there was also an increase in lightning-producing spring storms. These storms, they suggest, created the right conditions for frequent natural fires which would encourage, and maintain the presence of longleaf pine. They note that even today the mesic climatic regime "continues to provide an ideal environment for the longleaf pine and the Southern Evergreen Forest" (Thomas et al. 1995:64).

From about 5,000 B.P. and continuing to the present, Whitehead (1973) found pine increasing slightly, although oak appeared to remain dominant in natural forest stands. The precontact environment of the Piedmont Southeastern United States was termed "temperate deciduous forest" by Shelford (1974:56-88) with oak and hickory interspersed with pine, maple, ash, and other deciduous species (for a graphic representation see Shantz and Zon 1936). Küchler (1964) further supports this reconstruction.

Thomas et al. (1995:64) also suggest that other vegetational "adjustments" have included the filling in of Carolina bays with peat to form extensive pocosin wetlands and the expansion of coastal swamps under the influence of rising sea levels.

By the historic period the lower coastal plain was dominated by loblolly pine. Although the name means, literally, "mud puddle," and was likely applied since the tree grew on wet soils, the loblolly is also known as the "bull pine" because of its prodigious size and remarkable ability to invade dry, flat terrain and even the hilly uplands. The pines formed vast, open forests interrupted only by the occasional inland swamp and its accompanying hardwoods.

This area of the Coastal Plain, the soil, and the vegetation frequently attracted the attention of observant commentators. In the early eighteenth century John Wesley mentioned that:

> the Land is of four Sorts, Pine-barren, Oakland, Swamp and Marsh. The Pine-Land is of far the greatest Extent, especially near the Sea-Coasts. The Soil of this, is a dry, whitish Sand, producing Shrubs of several sorts, and between them a spiry, coarse Grass which Cattle do not love to feed on. But here and there is a little of a better kind, especially in the Savannahs (so they call the low, watry Meadows, which are usually intermixt with Pine-Lands) (Reese 1974:232-233).

Throughout Georgia's history, these "pine-barrens" were known as land of less value than other, more fertile tracts. Even as early as 1740, William Stephens provided an account which observed, "the American dialect distinguishes land into pine, oak and hickory, swamp, savannah, and marsh" (Frech and Swindler 1973:79). He commented that where oak and hickory tree grew "the soil is in general of a strong nature, and very well esteemed for planting, being found by experience to produce the best crops of Indian Corn, and most sorts of grain" (Frech and Swindler 1973:79). The swamp soils, with their "black moulds" were best for rice. The savannahs and marshes, while producing no trees, did contain large numbers of "canes," which were reported to be excellent winter forage for cattle. Only for the pine lands, "of a sandy surface," could Stephens find nothing encouraging to say.

English occupation of the countryside, including occupation of Georgia's pine barrens, gradually changed its appearance. The pines which dominated the topography, for example, began to give way to scrubby hardwoods by the early 1800s (Silver 1990:187). It is almost certain that the process was largely completed by the mid-1800s. Yet there were other, equally momentous changes. Turkeys and other wild fowl were less common, while the flocks of Carolina parakeets and passenger pigeons approached extinction. Buffaloes were already gone from the neighboring Piedmont. In the lowland swamps the beavers, otters, and minks were close to gone, as were other occasional visitors such as bears, wolves, panthers, and bobcats.

The countryside was becoming increasingly dominated by small farms. The new ecology, created by clearing and farming grains, encouraged flocks of quail. While the minks and otters gave way to hunting pressures, they were quickly replaced by the opossum. By the nineteenth century the most common animals were the cattle, hogs, and sheep brought by the Coastal Plain settlers. Silver notes that, "fewer canebrakes and overgrazed mixed hardwood forests attest to the forage habits of these Old World Beasts" (Silver 1990:187-188). The changes were dramatic, gradually giving rise to the lower Coastal Plain we know today.

PREHISTORIC AND HISTORIC OVERVIEW

Previous Research

Relatively few in-depth studies have been conducted at Fort Stewart. The majority of those readily available have been contracts, let by the United States Army, in an effort to determine the extent of cultural resources located on the base.

The earliest study of any intensity was that conducted in 1980 and 1981 by Professional Analysts, Inc. (Miller et al. 1983). The goal of the study was to conduct a sample survey in order to produce a predictive model for the entire facility (Thomas et al. 1995:70). The sample universe was established as all fire breaks less than 3-years old. These were stratified by soil association and a pedestrian survey was conducted. Only the actual fire break was examined and no shovel tests were excavated. Thomas et al. (1995:70) report that the total coverage was 370 km. Assuming that the fire breaks were an average of 3 m in width, this would account for about 111 ha. This represents a 0.1% survey of the entire base.

In addition to the stratified sample survey, a judgmental survey was conducted of base food plots and an effort was apparently made to relocate a number of previously identified sites on the base (Thomas et al. 1995:74). In all, 29 previously recorded archaeological sites were revisited.

The survey identified a total of 85 sites, including 50 prehistoric sites, 17 historic sites, and 18 prehistoric and historic sites. In all, 145 components were represented. This survey found a density of about 2 sites per ha. The site types included lithic scatters (many without diagnostic remains), villages, a burial mound, and riverine camps. Historic sites dated primarily to the late nineteenth century. Historic research also identified, as potential sites, 24 historic properties.

This study forms the nucleus of the fort's predictive model. Miller et al. (1983 quoted in Thomas et al. 1995:229) identified four probability zones:

> Very high probability — locations which include well-drained bluffs along the Ogeechee and Canoochee Rivers.
>
> High probability — areas where well-drained soils, such as Craven, Lakeland, Tifton, Pooler, Ocilla, Fuquay, and Stilson, occur. Also included areas in proximity to high order streams.
>
> Medium probability — areas which include all of the soil types that are not excessively drained or very poorly drained, representing the vast majority of the base. These areas essentially represent portions of Fort Stewart for which the survey coverage was inadequate to allow any reasonable prediction of probability.
>
> Low probability — areas where the soils, such as Rutledge, Mandarin, Osier, Johnston, Ellabelle, and Bibb, are either excessively drained or very poorly drained.

Thomas et al. (1995:238-247) provide a detailed analysis of this model. Most importantly, they provide a detailed listing of soils, assigning a probability ranking. While the single minded reliance by Miller et al. (1983) on soil and drainage to predict archaeological probability can be criticized, it does offer an initial focus for future efforts at Fort Stewart. This current study, in fact, is at least partially based on the early predictive

work by Miller and his colleagues. In the **Conclusions** to this study some further evaluation of its applicability is provided.

In 1988 a survey was conducted in the Brigade Maneuver area of Fort Stewart by Carolina Archaeological Services (Jackson et al. 1988). Not only is this survey tract situated just north of the current Taylors Creek and JAECK Drop Zone study areas, but it also included 1,507 ha — the largest single tract explored on the base. In spite of these important features, it is of limited comparability since it involved no shovel testing — all of the survey was pedestrian (Jackson et al. 1988:22; Thomas et al. 1995:83).

Forty-three archaeological sites were reported. The prehistoric sites included Early Archaic and Early Woodland remains, while the historic sites dated primarily from the late nineteenth and early twentieth centuries (Thomas et al. 1995:85).

Four site types were identified during the Carolina Archaeological Services survey:

> Site Type 1- Prehistoric campsites or lithic scatters — contain diagnostic or non-diagnostic lithic debris and/or ceramic sherds indicative of aboriginal subsistence activities.
>
> Site Type 2 - Late nineteenth and early twentieth century farmsteads and activity loci — contain diagnostic historic material, often in association with brick, features and/or aligned trees, or ornamental vegetation (i.e., orchards, groves, gardens).
>
> Site Type 3 - Historic Cemeteries — contain marked or unmarked human interments.
>
> Site Type 4 - Multicomponent sites (historic farmsteads/activity locus and prehistoric activity locus) — contain debris associated with historic farmsteads or activity loci, plus prehistoric activities.

An Early Archaic and Late Woodland geographical overlap was found within the Carolina Archaeological Services study (Jackson et al. 1988:46).

The study, in general (see Thomas et al. 1995:239-240), supports the probability assessments established by Miller et al. (1983). Jackson et al. (1988), however, note that site density may be higher than initially suggested for Fort Stewart. Although only 1 site per 24.6 ha was recorded, few of the high site potential soils were actually encountered in their survey (Thomas et al. 1995:85).

Prehistoric Overview

Overviews for Georgia's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared for Fort Stewart. Of special interest is the Historic Preservation Plan for Fort Stewart which provides a lengthy overview of the prehistoric cultural sequence (Thomas et al. 1995:100-119). There are, in addition, some "classic" sources well worth attention, such as Williams' edited works of Antonio J. Waring, Jr. (Williams 1968).

These can be supplemented with a broad range of theses and dissertations, such as Lewis Larson's examination of coastal subsistence technology (Larson 1969), Chester DePratter's discussion of Georgia chiefdoms (DePratter 1983), or Morgan Crook's examination of Mississippian community organization along the coast (Crook 1978).

Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic and Anderson et al. (1992) for the Paleoindian. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the

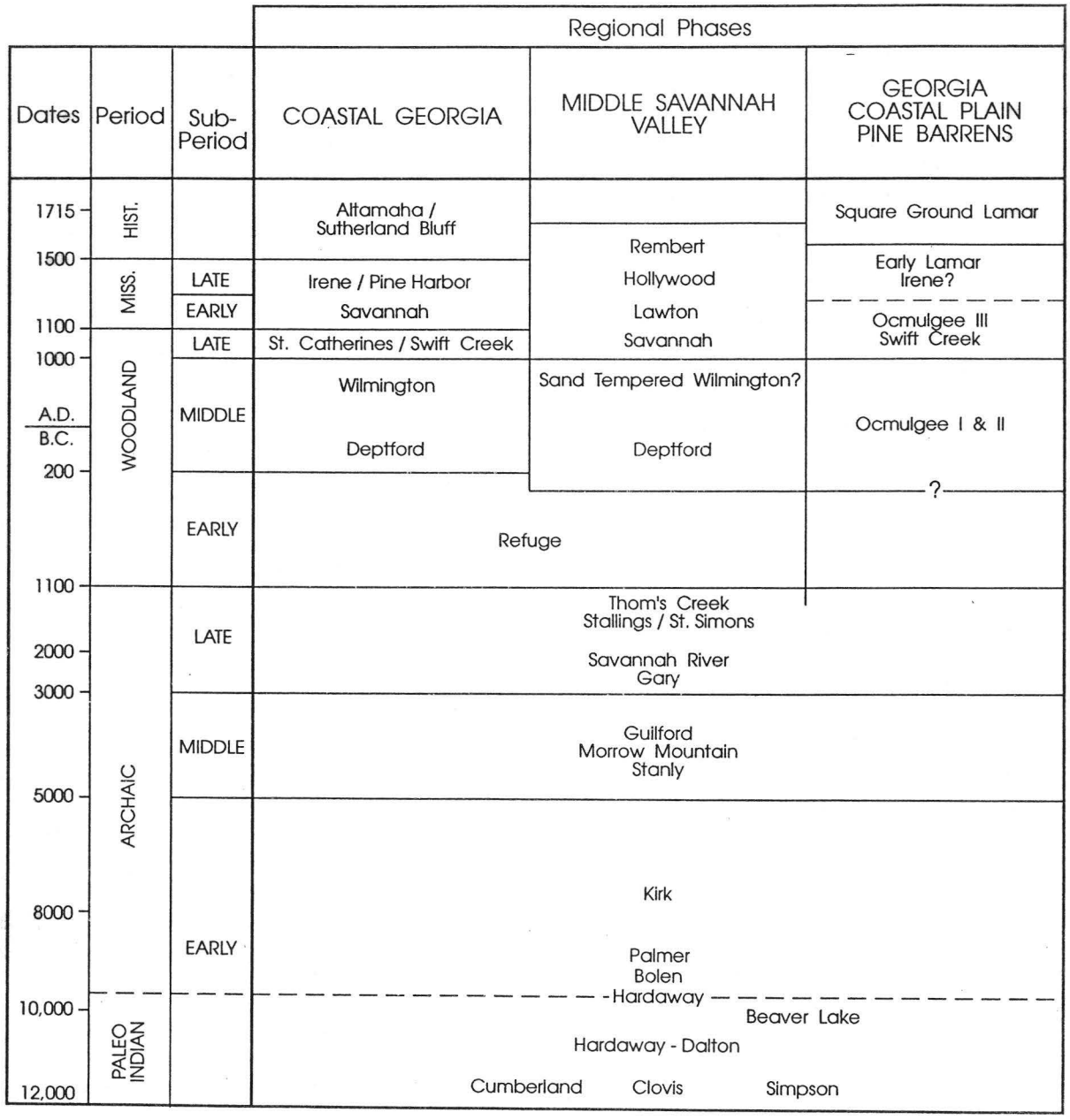


Figure 11. Cultural periods for the Georgia coastal region (adapted from Braley 1990; DePratter 1979:Table 30; Sassaman et al. 1990:Table 1).

current study. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States:* Paleoindian to World War I. Figure 11 offers a generalized view of Georgia's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points; side scrapers and end scrapers; and drills (Coe 1964; Michie 1977; Williams 1968). Some even suggest pushing the beginning date to as early as 14,000 B.P. (Oliver 1981). Non-fluted points such as the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, are occasional seen as representatives of the terminal phase of the Paleoindian Period. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[1] For the North Carolina area Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted and there appears to be no such continuum in Georgia.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is rather sparse for Georgia (Ledbetter et al. 1992). In spite of this, the distribution offered by Anderson (1992:Figure 5.1) reveals a rather general, and widespread, occurrence throughout the region. The recognition of Paleoindian sites in Georgia is hindered not only by a lack of research, but also by the small size of typical sites (often the Paleoindian component may be recognized by a single tool) and the heavy amount of reworking and curation seen in Paleoindian tools from Georgia (Ledbetter et al. 1992:261).

Distinctive projectile points include lanceolates such as Clovis, Dalton, Suwannee, and perhaps the Hardaway (Anderson 1990:7-9). During the later portion of the Paleoindian, many researchers (see Snow 1977:3-4, Figure 1 for example) borrow from Florida and suggest that these more classic large lanceolate points were replaced by smaller points with concave bases, such as the Tallahassee, Sante Fe, and Beaver Lake (Bullen 1975:45-47; Milanich and Fairbanks 1980:45). In addition, points such as the Bolen Plain and Bolen Beveled (Bullen 1975:44, 49-53; Milanich and Fairbanks 1980:45) are thought to be intermediate between the Late Paleoindian and Early Archaic in much the same way as the Palmer of South and North Carolina is regarded.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992 for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

According to Thomas et al. (1995:104-105) no Paleoindian sites have been identified on Fort Stewart through professional research (excepting the recovery of a Dalton projectile point from 9LI276 and a Hardaway-Dalton from 9BN36),

[1] While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

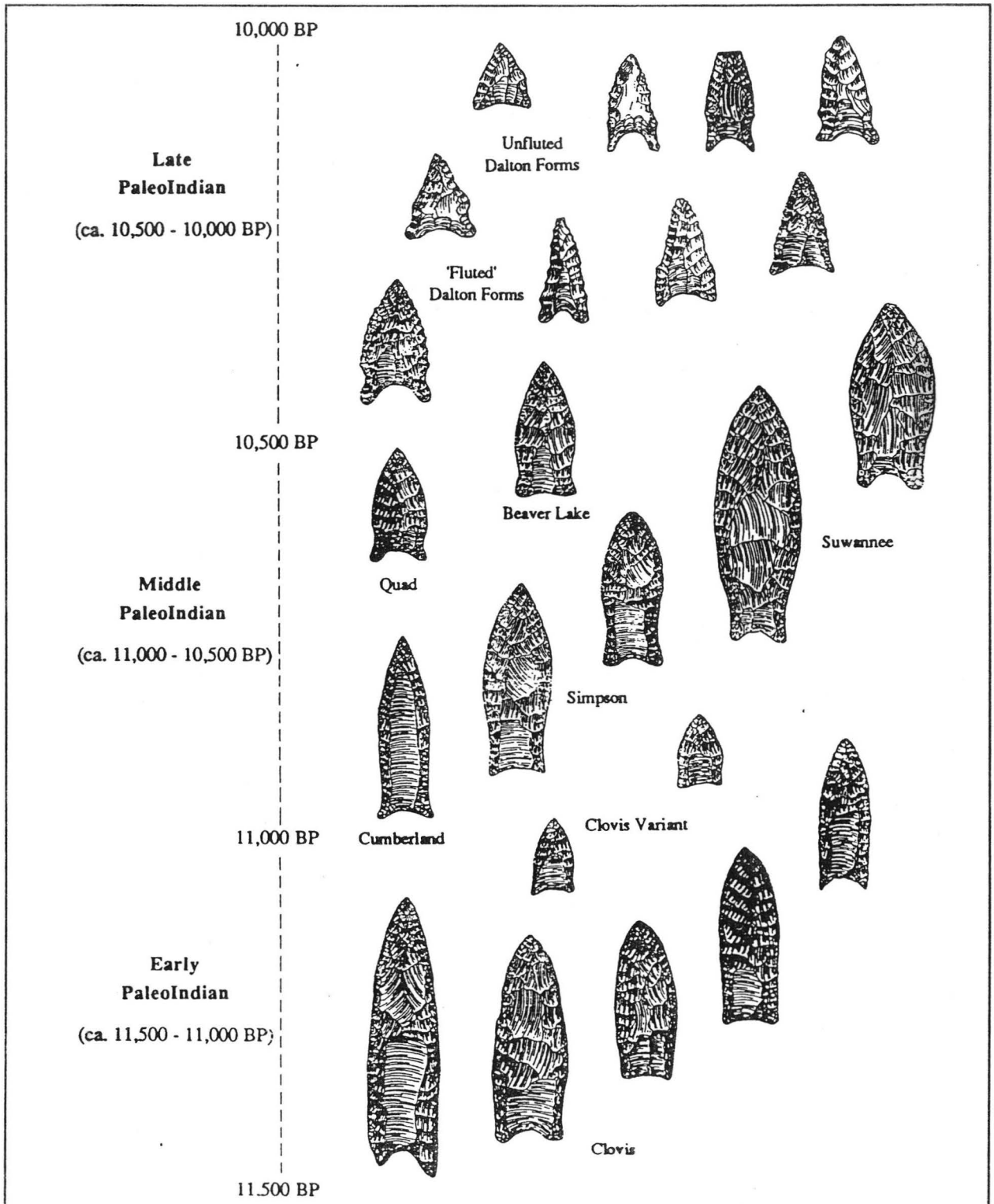


Figure 12. Diagnostic Paleoindian project points and suggested chronology for Georgia and the Carolinas (adapted from Anderson 1992:Figure 3.1).

although at least one local collector has reported early points from the general area. This near absence is attributed to the lack of readily available raw materials. Should Paleoindian materials be encountered, Georgia has developed a rather detailed preservation plan which outlines a broad range of appropriate research questions (Anderson et al. 1990).

The prevalence of Paleoindian occupation is dramatically increased, however, if Bolen and Palmer points are included. Thomas et al. (1995:108) note that several sites have produced these materials, which they attribute to the Early Archaic. In addition, Snow comments that "large choppers, unifacial blades, and scrapers" are found in the Coastal Plain, but can be attributed to the Paleoindian Period only on the basis of their "patination; some appear chalky, and display a general likeness to Paleo-Indian material of known antiquity" (Snow 1977:3).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[2], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

The review of available survey data by Thomas et al. (1995:108-109) suggest that there was a noticeable population increase from the Paleoindian to the Late Archaic (where at least 14 components were isolated). The increase in components over time certainly corresponds with generalized findings of other researchers, and may be tentatively associated with a greater emphasis on foraging. Thomas et al. (1995:108) note, however, that considerably fewer Early and Middle Archaic remains are found than seemingly should be present, based on comparable surveys elsewhere in the region. They suggest this may be the result of the sites being "buried in deep subsurface contexts" (Thomas et al. 1995:108). Unfortunately, they provide no substantive reasoning, geomorphological studies, or rationale for this assessment. Their comparative data consists of only one other survey, the Ebenezer Watershed (Fish 1976). Nor do they explore other explanations for the disparity between Archaic settlement in the Fort Stewart area and in this one other study area.

Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer and Bolen points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies. Other hallmarks of the Early Archaic are often considered to include a continued reliance on high quality lithic raw materials, a highly curated tool kit, high geographic mobility, and periodic aggregation of band-sized groups (see Anderson and Hanson 1988; Daniel 1992).

---

[2] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery."

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites may be thought of as special purpose or foraging sites.

There are several intensively occupied Early Archaic sites which are of special importance in our understanding of this period, including the Lewis East and Pen Point sites in South Carolina (for a review, see Sassaman and Anderson 1994:84-85) and the Taylor Hill site in Georgia (Elliott and Doyon 1981).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Halifax and Stanly projectile points. Ledbetter remarks that a possible regional variant includes the side-notched or corner-notched points similar to Halifax, as well as an elongated point known as the Brier Creek Lanceloate (Ledbetter 1995:12; Michie 1968; Sassaman and Anderson 1994:27). Also observed during this period is the MALA (Middle Archaic-Late Archaic) point, which are typically made from heat-treated chert and considered by some to be a regional variant of the Benton type (see Sassaman 1985; see also Sassaman and Anderson 1994:27-29 for a more updated discussion).

Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). Closer to Georgia, Ledbetter (1995:12) notes that the work at Pen Point on the Savannah River, as well as work at Fort Gordon (9CB81, see Braley and Price 1991), and 9RI178 (Elliott et al. 1994).

There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrappers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Curated tools are less common. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

Coastal Plain settlement models for the Middle Archaic have traditionally focused on the near absence of diagnostic material. It has been suggested that the "Pine Barrens" were unattractive or could not support dense occupation. This view has been espoused by Larson (1980). As Sassaman and Anderson (1994:149) suggest, it may be that Middle Archaic groups avoided the coastal plain not because the area was impoverished, but rather because the available resources were patchy and this "patchiness" resulted in high "hidden" costs such as constant movement, increasing specialization, and the need to store larger quantities of food.

Sassaman and Anderson (1994:150-152) also briefly review the evidence supporting a focus on swamp floodplains during the Middle Archaic, noting that while such environmental settings can be difficult to identify, they do seem to be associated with large, multicomponent sites. In addition, they illustrate the mounting evidence to support seasonal rounds or seasonal transhumance between the coast and the interior (e.g., Milanich 1971).

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). In addition, research in the Georgia Coastal Plain suggests the presence of Gary Points, having a triangular blade,

squared shoulders, a contracting stem, and a rounded or occasionally pointed base (see Smith 1978 for examples from Laurens County, Georgia). These Late Archaic people continued to intensively exploit the uplands although the Fort Stewart data appears so skewed compared to other regions, that it is difficult to understand exactly what might have been happening in this area.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type, developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery. This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont where it was originally developed (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44; Sassaman 1993:16-41). This innovation is of special importance along the Georgia and South Carolina coasts.

Coupled with the presence of fiber-tempered Stallings or St. Simons pottery (Griffin 1943; DePratter 1991:159-162) are also a broad range of worked bone and shell items, such as engraved bone pins, whelk columella beads, and antler projectiles. Coupled with these artifacts are shell rings — dough-nut shaped heaps of shells ranging from only a few feet in height to over 20 feet (see Trinkley 1985 for a general overview). There is evidence that these shell rings represent gradually formed habitation sites with occupation taking place on the rings. The sites appear to reflect permanent, year-round occupation suggesting that the coastal St. Simons and co-evil Thom's Creek (found primarily northeast of the Savannah River in South Carolina) groups were able to schedule their subsistence activities to allow stable settlements (Trinkley 1980).

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Coastal Plain of Georgia without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

Sassaman (1993:55) recalls the cautions of Joseph Caldwell, who found "the regional landscape of the Early Woodland ceramic traditions" a "fascinating array of local developments and diverse extralocal influences." As a consequence, the Early Woodland becomes quickly confused and difficult to interpret.

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics

would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings, St. Simons, and (to a lesser extent) Thoms Creek series (Griffin 1943; Trinkley 1976; DePratter 1991:159-162). The fiber-tempered Stallings and St. Simons wares and the sandy paste Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976).

Others would have the Woodland beginning about 3,000 B.P. with the introduction of the Refuge wares, also characterized by sandy paste, but often having only a plain or dentate-stamped surface (DePratter 1976, 1991:163-167; Waring 1968). There is evidence that the punctated and dentate surface decorations are gradually replaced by plain and simple stamped treatments. Sassaman et al. (1990:191) report a distribution similar to the earlier fiber-tempered and Thom's Creek wares, and suggest that the Refuge wares evolved directly from these earlier antecedents.

On the Georgia coast the Refuge has been subdivided into three subphases, with plain and dentate stamping found during the entire period. Toward the end, linear and check stamping is introduced, sometimes with grog or clay tempering. Typically these sites are found on ridges or other high, sandy ground, although DePratter also notes that many sites have been inundated by the rising sea level and are situated in the marsh (DePratter 1976:6-8).

Oelmer ceramics, which admittedly are poorly understood (DePratter 1979:177), are likely a Refuge-Deptford transition. DePratter describes the pottery's check stamping as consisting:

> of small, rhomboid or diamond checks, carefully applied to the vessel surface without overstamping. The [Oelmer] complicated stamping is somewhat unusual, consisting of small, carefully executed line-filled triangles, nested diamonds, and other motifs (DePratter 1979:117).

He observes that the largest sample comes from the Oelmer site and that other researchers have occasionally called the pottery Deptford Geometric Stamped. The pottery is so uncommon that it may well represent only a variety of either Refuge or Deptford.

In spite of the relative lack of detailed investigations at Early Woodland sites, it seems likely that the subsistence economy was based primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish. This is based on an impression that there was a continuation of a generalized Late Archaic pattern, which may or may not be appropriate.

Fort Stewart has apparently produced no Refuge sites and Thomas et al. (1995:113) doubt that such sites will exist in the Coastal Plain unless possibly associated with earlier fiber-tempered sites. They note, however, that the Georgia State Site files report the presence of at least 26 Refuge/Oelmer components at sites in "the area surrounding and including the study tract" (Thomas et al. 1995:113). Consequently, it is difficult to assess the potential for Refuge sites at Fort Stewart.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,500 B.P. to about 1,200 B.P. The most characteristic pottery of this time period is Deptford, although both Swift Creek and Wilmington are likely late additions. Regardless, the Middle Woodland is best understood in the context of Deptford, which has been carefully described by DePratter (1979:118-119, 123-127), who suggests two divisions with check stamping and cord marking gradually being supplemented by complicated stamping. The introduction of clay or grog tempered Wilmington wares follows on the heels of the Deptford phase.

We do not, however, mean to imply that the origin of the Middle Woodland is well understood. In fact, Sassaman takes some pains to emphasize that the transition from Refuge to Deptford is not well understood:

> the Refuge-Deptford problem is the result of numerous regional processes that converge in the Savannah River region between 3000 and 2000 B.P. The sociopolitical entities that existed on the coast and in the interior during the fourth millennium dissolved after about 2400 B.P., resulting in the dispersal of small populations across the region. . . . Pottery designs changed from highly individualistic punctation and incision to the (seemingly) anonymous use of dowels for stamping. . . . the use of a carved paddle for simple stamping should mark the "blending" of Refuge and Deptford culture, or, more accurately, reflect the subsumption of Refuge culture by the expanding Deptford complex.
>
> To complicate matters, the tradition of cord-wrapped paddles makes its way into the South Carolina area sometime after 2500 B.P. (Sassaman 1993:118-119).

The work by Milanich (1971) and Smith (1972), coupled with the considerable additional site-specific research (see, for example, DePratter 1991; Sassaman 1993:110-125; Thomas and Larsen 1979) provides an exceptional background for this particular phase. Milanich's (1971) interpretation of a coastal-estuarine settlement model with interior occupation limited to short-term extractive activities, while still useful, has been modified through the discovery of a number of interior base camps. In fact, there seems to be evidence for a number of interior seasonal or perhaps even permanent base camps, although there is as yet no convincing evidence of horticulture. Thomas et al. (1995:111) suggest that there have been few efforts "to enhance or refine Milanich's interpretations of settlement patterns." This, of course, is not strictly correct and Anderson (1985:48) provides a brief overview of some very significant concerns. He notes that Milanich's interpretation that the interior river valleys were used by small, residentially mobile foraging groups which dispersed from large coastal villages is clearly not correct. In fact, just the opposite appears more likely, with coastal use and settlement being seasonal (Anderson 1985:48-49).

DePratter (1979:119, 128-131; 1991) takes the position that Wilmington pottery post-dates Deptford, ushering in the use of grog or clay as a tempering material in the late Middle Woodland. The check stamping and complicated stamped motifs found in the Deptford continue, except with clay tempering for a short time. Called Walthour, these wares are described by DePratter (1991:174-176), but they apparently existed for only a short period of time before being completely replaced by cord marking (DePratter 1979:119).

Wilmington phase sites are rather poorly understood in the Georgia Coastal Plain. No only has there been little effort to develop settlement models incorporating the Wilmington, there is very little technological research on the pottery itself. The potential importance of the Wilmington phase is perhaps evidenced by Snow's (1977) survey of the Ocmulgee Big Bend area, where large quantities of what he called "Ocmulgee I" pottery was found. He specifically states that this ware "is not Wilmington" (Snow 1977:42), noting that while there is some clay tempering (certainly not the abundant grog tempering of classic Wilmington), much of the pottery has a sandy paste (Snow 1977:36). Perhaps the most distinctive characteristic of this pottery (which is associated with at least one burial mound) is a heavy folded rim. Folded rims seem to gradually drop out, while the paste becomes increasingly more gritty in succeeding Ocmulgee II and III types.

Curiously, coupled with the coastal Wilmington material is what the W.P.A. researchers called Chatham County Cord Marked (DePratter 1991:179-180), a grit-tempered (rather than clay-tempered) heavy cord marked pottery. DePratter remarks this is possibly related to the "sand tempered" pottery that Stoltman (1974:63), further up the Savannah River, called "Wilmington."

It seems that Georgia, just like South Carolina and North Carolina, is struggling to comprehend, and deal with, a broad array of Middle Woodland cord marked pottery.

Although Deptford pottery is well recognized, the associated lithic technology is not. For Florida, Milanich and Fairbanks (1980:75-76) mention only that "medium-sized triangular" points are present. Yadkin-like triangular points are reported to be found with Wilmington sites (Anonymous 1940). Snow (1977:Figure 12) reports a broad range of small triangular points with his Ocmulgee I, II, and III cord marked pottery. The bulk of these appear to resemble more traditional Yadkin and Caraway points (Coe 1964:30-32, 49).

The Middle Woodland cannot be fully appreciated without reference to Hopewellian influences, whether the presence of coastal sand burial mounds and their evidence of status differences (e.g., Thomas and Larsen 1979) or the presence of occasional exchange goods. Sassaman et al. note that while there is a lack of "obvious" Hopewellian influence in the Savannah area, there is nevertheless evidence of a "higher order of sociopolitical complexity" (Sassaman et al. 1990:14). They note that the broad similarities in ceramic design evidence the movement of ideas, or "interprovincial integration," not seen in the Early Woodland. The presence of coastal shells found at interior sites demonstrates the movement of goods.

At Fort Stewart the Middle Woodland period is better represented than the Early Woodland. Ten sites have produced Deptford remains. No sites have been reported with Wilmington pottery, although it is not clear from the summary by Thomas et al. (1995:113-114) if any of the Deptford sites produced sandy paste "Wilmington" pottery. Thomas et al. (1995) fail to discuss lithic resources, so it is not possible to ascertain if Middle Woodland lithic scatters have been encountered.

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas and Georgia there were major cultural changes, such as the continued development and elaboration of agriculture, the coastal South Carolina and Georgia groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971). Anderson (1994:366-368) provides a basic review of the Late Woodland and Mississippian ceramic sequence at the mouth of the Savannah River. This review is particularly useful since it also compares and contrasts these developments to those in the middle and upper reaches of the Savannah (Anderson 1994:368-377).

Milanich (1971:148-149) and Caldwell (1970:91) saw the St. Catherines pottery, which seemingly characterizes the Late Woodland, as an important aspect in the gradual progression from Deptford to Wilmington to St. Catherines to Savannah. Perhaps the most succinct summary of the Georgia Late Woodland St. Catherines phase is that offered by DePratter and Howard (1980:16-17). Significantly, they note that most of the Georgia data comes from burial mound excavations, "because only limited village [and presumably shell midden] excavations have been conducted" (DePratter and Howard 1980:16). Even with burials there is a limited range of artifact types — shell beads, worked whelk shell bowls or drinking cups, bone pins, and triangular projectile points. Not only is little known about village life, nothing is known concerning residential structures and there is no good evidence of agricultural crops. Once again, the Late Woodland is presented as little more than an extension of the previous Middle Woodland lifeways.

DePratter (1979:119) provides a generalized introduction to the St. Catherines phase, noting its original definition by Caldwell (1971) and remarking that the ceramics are:

> characterized by finer clay tempering than that of preceding

> Wilmington types and by the increased care with which the ceramics were finished. The lumpy contorted surface of Wilmington types was replaced by carefully smoothed and often burnished interiors and exteriors (DePratter 1979:119).

DePratter also notes that the temper in the St. Catherines pottery consists of "crushed sherd or crushed low-fired clay fragments" (DePratter 1979:131). One of the few studies of prehistoric temper which involved detailed chemical and petrographic analyses included a sample of six St. Catherines sherds (Donahue et al. n.d.) The study found that the trend toward decreasing grain size of the aplastic component, begun in the Middle Woodland, continues into the Late Woodland. In contrast, the grog inclusions are coarse, ranging from about 2 to 3 mm, and they contain quartz grains (perhaps reflecting the temper of the crushed sherds).

More recent investigation of St. Catherines pottery in South Carolina found that while there is considerable variability in both size and frequency of temper, there is no compelling evidence that sherds were being crushed and used as temper. The most likely explanation for the observed similarity of both paste and temper is that the temper represents dried lumps of clay which have been incorporated back into the clay during the forming of vessels. On the other hand, the same study also found that there appear to be distinct chemical differences between the paste and temper. This suggests that the dried clay used as tempering was perhaps "left-over" from earlier potting episodes (Trinkley and Adams 1994:58-60).

Although the conventional wisdom is that the St. Catherines phase drew to a close around A.D. 1150, there is mounting evidence that the phase may extend into the thirteenth or fourteenth century A.D. (see Trinkley and Adams 1994:108-110, 114-115). There may be a blurring of Middle and Late Woodland lifeways well into later periods. The resulting cultural conservativism may help explain the presence of relatively few large Late Woodland villages and the apparent absence of corn agriculture until very late along the coast.

On the coast, Hopewellian influences may be more obvious than originally thought, if the multitude of sand burial mounds being investigated by the American Museum of Natural History are as early as reported. For example, the investigations at South End Mound II on St. Catherines Island suggest the earliest burial, placed in a pit about A.D. 1000, was associated with a copper sheet, had copper earspools, and included a diabase-like pendant (Larsen and Thomas 1986:25).

Moving away from the coast and into the inner Coastal Plain there is considerably less data. It is difficult, for example, to determine how far inland St. Catherines wares are reported, or if they exist at all. Once again relying on Snow's examination of the Ocmulgee Big Bend area, there is no evidence of St. Catherines pottery. Instead, it seems that the cord marked Ocmulgee wares fill the gap. Snow even mentions that his Ocmulgee III pottery, which is found with small triangular points, shows "some traits suggestive of closer ties with coastal Savannah II Cordmarked ceramics" (Snow 1977:43), suggesting that the Ocmulgee II wares may be Late Woodland. This may help explain why no St. Catherines sites have been found at Fort Stewart (Thomas et al. 1995:114), although clearly the lack of detailed surveys cannot be ignored.

Better known is the Swift Creek Phase, often viewed as either late Middle Woodland or Late Woodland. Swift Creek materials extend from the Gulf of Florida, where the phase was first identified (Willey 1949:378-383) into the coastal plain and piedmont of Alabama, Georgia, and South Carolina. Diagnostic artifacts include pottery with intricate, well-executed, curvilinear complicated stamped motifs. Also present are occasional suggestions of Hopewell ritual, especially among the burials. Sites include semi-permanent villages, some with burial mounds and occasionally small platform-like mounds, as well as small camps (Jefferies 1994; Keller et al. 1962; see also Sears 1956:53-54 and Sassaman et al. 1990:205-206 for regional overviews). Although there are few appropriate local studies, Snow does illustrate a number of early and late Swift Creek

sherds from the Ocmulgee Big Bend area (Snow 1977:Figure 6a, 7a, 7b). This suggests that Swift Creek phase sites may be found in the Fort Stewart area.

South Appalachian Mississippian

As Schnell and Wright (1993:2) observe, "Mississippian" means different things to different people — even to its earliest researchers. To Willey (1966) it meant a particular group of traits. To Griffin (1985) it meant a complex social and technological interaction sphere. To Smith (1986) it was defined as an adaptive strategy. The meaning is further distorted, or at least affected, when the issue is viewed from a strict temporal or chronological orientation, such as this presentation (since to us, the period covers the period from about A.D. 900 to A.D. 1500).

The Mississippian is viewed rather basically by Thomas et al. (1995:114). They focus on a simple coastal chronology based almost entirely on the results of excavations at Irene (Caldwell and McCann 1941) and the resulting synthesis by DePratter (1979:Table 30; 1991:183-193). In this scenario the Savannah Phase, consisting of three subphases, is followed by the Irene, broken into two subphases.

The Savannah, characterized by cord marking, is seen as developing from earlier cultures. Present are flat-topped temple mounds, although these are seen by some researchers to be less common in the Altamaha region. While the settlement system is very similar to that of the Late Woodland, there are also nucleated settlements found near estuaries and along freshwater rivers further inland. Although agriculture is seen by many as almost essential, there is no good evidence for corn or other domesticated crops.

Savannah II is distinguished by the introduction of check stamping and Savannah III is defined by the presence of complicated stamping. The Savannah III Complicated Stamped pottery is primarily curvilinear, often of concentric circles or oval motifs. Sassaman et al. (1990:207) suggest that the current temporal ranges are likely too restrictive for these subphases and suggest instead broader period of perhaps A.D. 1100 to 1200 for Savannah II and perhaps A.D. 1200 to 1300 for Savannah III.

The Savannah Phase, according to Thomas et al. (1995:117), is the best represented of any period at Fort Stewart, with 25 sites producing Savannah pottery. They also note that not only are the sites more numerous, but the collections from the sites are larger, "suggesting that the Fort Stewart/Hunter Army Airfield area was a place of intense occupation by Savannah populations" (Thomas et al. 1995:117). Most important among the Savannah sites appears to be the Lewis Mound (9BN39) and associated habitation area.

The Savannah phase gives way to what is often called the Irene Phase, probably beginning about A.D. 1300. The Irene I Phase is identified by the appearance of Irene Complicated Stamped pottery using the filfot cross and line block motifs. Not only are these motifs different from the earlier Savannah Complicated Stamped designs, but the Irene ware is characterized by grit inclusions and a coarse texture, compared to the Savannah's sandy inclusions and fine to medium-grained paste.

Also present in Irene collections are a range of rim decorations, including nodes, rosettes, and fillet appliques. Although incising is found in very low quantities during this early period, the succeeding Irene II phase is characterized by bold incising. The mouth of the Savannah River, however, was likely abandoned by the end of the Irene I Phase since little incising is found in this area.

Larson (1955) sought to distinguish his central coastal Pine Harbor incised material from the Irene wares of the northern coast. Braley (1990:98) suggests that the Pine Harbor material is both geographically and temporally distinct from Irene. He also suggests that the presence of the Pine Harbor Phase on the middle coast may help explain the apparent abandonment of the Savannah area, suggesting that the coastal groups shifted southward in order to make themselves more accessible to the interior Oconee chiefdoms (Braley 1990:99).

The situation, however, become considerably more muddled when the view is shifted inland — to the Pine Barrens in the vicinity of Fort Stewart, for example. Schnell and Wright explain that "almost nothing can be found in the literature" (Schnell and Wright 1993:41).

Using data from several Ocmulgee Big Bend sites, they note that there is a small collection of cord marked pottery, sometimes incorporated in an assemblage of plain and roughened wares, which dates from perhaps A.D. 800 to A.D. 1400 — falling within the temporal limits of the Mississippian. They note that Crook, who defined a Middle Ocmulgee Phase dating from A.D. 200 to about 900 and a Late Ocmulgee Phase from about A.D. 900 to 1600, distinguishes the two by increasing frequencies of triangular points and cord marked pottery. They also note that Crook suggests these occupations are associated with "conservative" cultural adaptations — an argument similar to that advanced for the late occurrence of St. Catherines wares along the South Carolina coast.

Snow, also exploring the Ocmulgee and Satilla river drainages, defines what he calls the Square Ground Lamar ceramic assemblage which apparently is coeval with late Irene (Snow 1990). Prior to this, the area is apparently dominated by the cord marked Ocmulgee III pottery. The Square Ground wares have 10 to 12 incised lines around the rim and below a stamp consisting of a central dot with four lines radiating out. Each of the resulting four quadrants is usually filled with chevrons (Snow 1990:Figure 5). He suggests that the "Square Ground Lamar pottery may equate with [the] Hitchiti people" of the lower Ocmulgee (Snow 1990:87).

The simple importance of these discussions is that there is far too little information presently available to allow any clear or certain understanding of what may be present in Fort Stewart area. Consequently, while Thomas et al. (1995:118) note that no Irene sites have been found at Fort Stewart, it seems premature to argue that Lamar influences are absent, or that the Pine Barrens were, in fact, deserted.

Protohistoric and Historic Contact

The Protohistoric ceramic assemblages along the immediate coast are typically identified as Altamaha (DePratter 1979), King George (Caldwell 1943), San Marcos (Smith 1948), and Sunderland Bluff (Larson 1978). The period is often dated from about A.D. 1550 to 1700, although Green (1991:106) argues that minimally it should be extended to 1715 in order to include the Yemassee-produced pottery of South Carolina and perhaps even as late as 1763 to coincide with Smith's (1948) St. Augustine period.

Regardless of precise dating, the ware is thought to include complicated stamping (including rectilinear and curvilinear motifs), check stamping, incising, plain, burnished plain, and a red filmed ware. Green suggests a continuum from Irene to Altamaha. Vessel forms include jars, bowls, plates, and pitchers. Some include strap and loop handles as well as foot rings, clearly revealing a strong European influence. The San Marcos pottery is associated with limestone tempering, while the Altamaha and King George wares exhibit fine grit or sand.

Snow (1990:92-93) reports a dramatic decrease in the number of Altamaha sites compared to the preceding Square Ground sites in the Pine Barrens of the Ocmulgee Big Bend area. He also notes that in addition to Altamaha ceramics, there are also examples of "Miller ceramics from the Apalachee region of northwest Florida," "a smoothed-over check stamped ware, similar to Leon Check Stamped from mission sites in north Florida" and even "Ocmulgee Check Stamped known from the Macon Plateau site." Also present are "European trade items such as glass beads and copper" (Snow 1990:93). All are representative of European contact and suggest that there was considerable movement late in the history of the region. From the historic period, Snow reports the presence of both Ocmulgee Fields, Chattahoochee Brushed, Mission Red Filmed, and Leon-Jefferson Complicated Stamped pottery — all presumably associated with Creek sites (Snow 1990:93). Unfortunately, little more than the presence of these various wares is known about the historic or contact period sites in the

area.

Historic Overview

The Native American population of southeastern North America first encountered Europeans during the 1539-1542 Spanish expeditions of Hernando de Soto. It was shortly after that, in 1566, that the Spaniard Pedro Menendez de Aviles, founder of St. Augustine, met with the Guale Indians on St. Catherines Island and established a small outpost and mission on the island (Coleman 1960:1; see also Jones 1978). Georgia's coast began to export grain and citrus fruits and the early 1600s, missions were well established in fertile south and central Georgia (Hodler and Schretter 1986:70; see also Thomas 1987 and Larsen 1990).

By 1663 the ownership of lands within the confines of Georgia would become the center of great debates, dialogues, and eventually armed combat between Spanish and English interests. In granting the Carolina colony, Charles II had established that Spanish-held St. Augustine would constitute the southern boundary of the colony. With the presence of Spanish presidios and intensified English trading with Native American populations going on in the lands between Charles Towne and St. Augustine, tensions mounted between the two European powers.

The Origins of Georgia

The settlement of the Georgia colony is attributed to a perceived need by the English Crown to establish a military buffer zone between Spanish lands to the north of the Altamaha River and the English settlement of Charles Towne along the Atlantic coast of present day South Carolina (Coleman 1960:2). There was, as well, a strong Carolinian interest in tapping Georgia's potential for the deer skin trade and the use of Native Americans in military alliances against the other European powers. By effectively placing these lands under one sovereign, i.e., England, a number of these problems between England and Spain would be resolved.

The charter for the Georgia colony was granted in July of 1732, and by November James Oglethorpe set sail from England with the first shipload of colonists (Coleman 1960:5; DePratter and Howard 1980:42). South Carolina had relinquished territory to create Georgia and the new colony's original western boundary was the "South Seas," or the Pacific Ocean. By 1763, the boundary became the Mississippi River and, in 1802, Georgia ceded to the United States what would become Mississippi and Alabama and assumed its present form (Hodler and Schretter 1986:71).

The original settlers, numbering from 114 to 125 souls, established a settlement 29 km from the coast along the Savannah River on Yamacraw Bluff on February 12, 1733 (Coleman 1960:5; DePratter and Howard 1980;42; Hvidt et al. 1980:35).

Although Oglethorpe was appointed as representative for the colony's Trustees, he actually held no legislative or authoritarian powers over the colonists. Yet, he attempted to establish the Georgia Colony in a more philanthropic manner than its neighboring colony of Carolina to the north (Coleman 1960:8). Oglethorpe's philanthropic views may have been in direct response to problems encountered by the Carolina Proprietors. The trade in deer skins and the use of Native Americans as slaves during the early colonial period had caused personal and political problems for South Carolina's elite rulers (Barr 1996). Oglethorpe hoped to eliminate this and problems associated with the ownership of African American slaves within the Georgia colony.

While South Carolina became quickly dominated by a few large, primarily indigo and rice, plantations operated under the forced labor of thousands of African Americans, Oglethorpe envisioned a "kinder and gentler" colony of small land owners growing a broad range of crops. He foresaw land granted in small parcels and both slavery and rum were outlawed in 1736 (DePratter and Howard 1980:43).

Unfortunately Georgia was unable to retain its vision as a colony of sober men living off their own labor and rewards contributed through

the working of small farms. Changes within the colony's structure were already evident when, in 1743, Oglethorpe was replaced by the Board of Trustees for the colony with William Stephens. As early as 1740 maximum land holdings were increased to 2000 acres, allowing the formation of small plantations (DePratter and Howard 1980:44). By 1750 the ban on the importation of slaves was dropped. Elite land owners and investors from South Carolina began to purchase lands along the Savannah River (Rowland 1987), and the timbre of Georgia society began to change. By 1750 African Americans constituted one third of Georgia's 3,000 residents (Coleman 1960:11).

In 1752 the Royal trusteeship charter expired and Georgia became a crown colony. In 1758 the Georgia Assembly established a governmental framework as part of the official church act. The province was divided into eight parishes (W.P.A. Writers' Program 1990:39. The tract which is today Fort Stewart lay primarily in the parishes of St. Johns and St. Phillips, with some western portions falling into St. Andrews Parish (Campbell et al. 1995:73).

The 1740s and 1750s were a period of growth in Georgia. Under the influence of her neighbor to the north large plantations began to dot the landscape. The introduction of intertidal rice agriculture and the rise of indigo production, brought on by world wide military and economic events (Barr 1996; Coclanis 1989; Weir 1983), would rapidly move Georgia into the mainstream of southern plantation agronomic production. Eventually Georgia evolved into a significant colony in its own right. By 1776, Georgia retained very little of its pre-colonial concepts and contained a population of 40,000 to 50,000 people, with about half of that number being African American slaves (Coleman 1960:13; DePratter and Howard 1980:44).

The Revolutionary War

Within the southern colonies the War for American Independence was similar to that of the American Civil War. Quite often family loyalties were divided between kith and kin (Barr 1994; Coleman 1960:17). Other than the capture of major population centers such as Charles Town, Savannah, and Augusta by the British, much of the war was a series of small, local engagements fought between loyalist troops and their patriot counterparts (Coakley 1989; DePratter and Howard 1980;44-45).

For most of 1779 the British held Savannah and the surrounding ground. In early fall of 1779 American and French troops made an abortive attempt to take Savannah. Among the 750 French and American casualties was Count Casimir Puluski, for whom Fort Puluski was named. It was not until July of 1782 that the British abandoned Savannah, ending British occupation of Georgia (Coulter 1960:146-147; DePratter and Howard 1980:45). Other nearby skirmishes include the 1776 Battle of the Rice Boats at Tybee Island and the 1778 Battle of Bulltown Swamp at Midway.

Although Oglethorpe had established a number of defensive communities west of Savannah, such as Fort Argyle on the Ogeechee River, most of these settlements failed due to the poor agricultural conditions of the Pine Barrens and lack of communication and readily available shipping route to Savannah (DePratter and Howard 1980:43; see also Figure 13). Yet, they did set a precedent for settlement once the Revolutionary War was resolved.

With the war's conclusion, major treaties and concessions from the Cherokee and Creek Indian tribes (1782-1804) allowed the full scale development of lands within central and eastern Georgia. While these cessions have no direct bearing on our understanding of the Fort Stewart area, they are a significant aspect of Georgia history. Perhaps the most succinct overview is that offered by Green (1979:24-41). He recounts the early, and peaceful start of English-Creek relationships with the 1733 and 1739 treaties skillfully brokered by Oglethorpe and explores the gradual deterioration of relationships as the English greedily lusted for expansion. Green also explores the careful balance between the French, Spanish, and English which Creek sought to maintain in order to ensure their own survival (Green 1979:26). As this power balance collapsed,

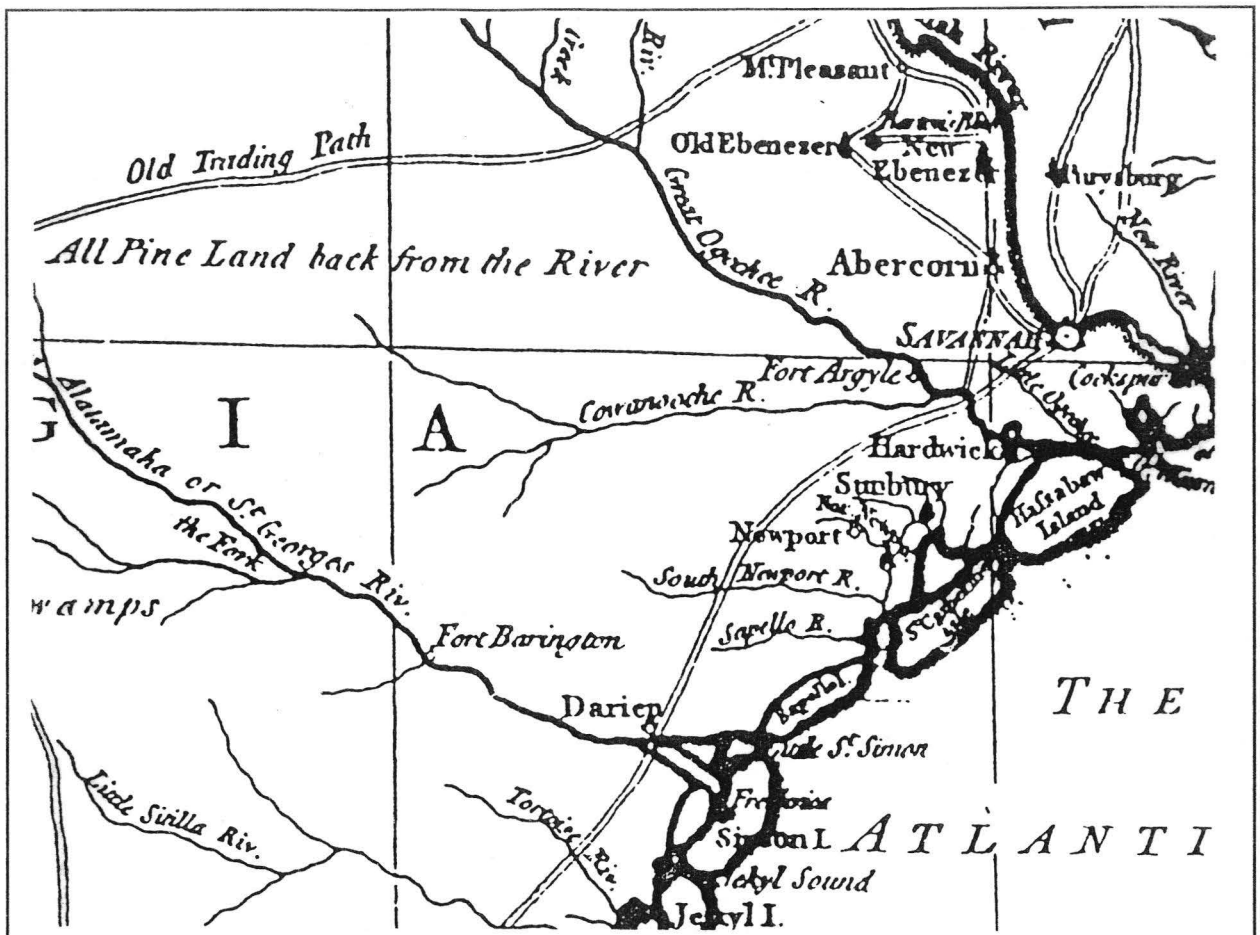


Figure 13. A portion of Hinton's 1779 *A New and Accurate Map of the Province of Georgia* showing the project area.

the English availed themselves of the Creek's weakness. Falling deeply into debt, the Creek nation ceded additional land on the Upper Savannah.

During the American Revolution the British influence among the Creeks was skillfully maintained by Alexander McGillivray, a Creek with mixed Scots and French ancestry. Even after the Revolution, McGillivray continued to be an important council to the Creeks, as they strove to balance the power of the Americans and the Spanish. By 1812 the Creeks were deeply divided by a factional conflict which escalated into a civil war between those best described as classic nativists and those who were Anglicized. This civil war became the Creek War in 1813 as those land-hungry Americans, like Andrew Jackson, looking for a reason to intervene found an excuse to wage a "just war." Tennesseans, Georgians, and Mississippians jumped at the excuse to wage a "war of extermination" in order to free additional land. After the death of at least 3000 Creek nativists, the Treaty of Fort Jackson was signed in August 1814.

But returning to the colonial period in Georgia, economic factors had also come into play concerning the inland agronomic development of Georgia. Inland areas of the state were better suited for the cultivation of upland cotton as opposed to rice, indigo, and sea island cotton which were the staple crops grown along the coast. The invention of the cotton gin by Eli Whitney in Savannah in 1793 gave new impetus to the

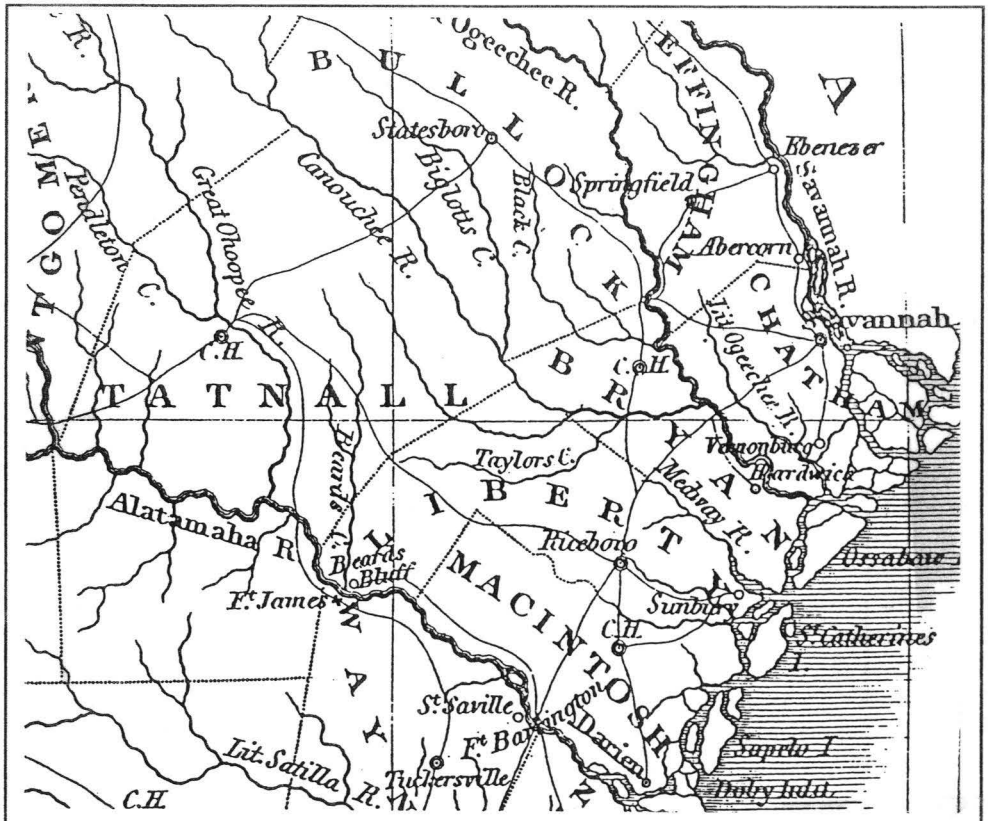


Figure 14. A portion of Finley's 1824 *Georgia* showing the project area.

commercial growth and export of upland cotton.

It was during the post-Revolutionary War period when we see considerable evolution in the counties. As Campbell and her colleagues observe, poor transportation networks and the increased need for governmental services lead to the creation of most new counties. Bryan County was created in 1793 and Tattnall was created in 1801 (Campbell et al. 1995:98).

The Antebellum Period

By 1820, 60% of upland farmers were growing cotton, and slavery played an ever increasing role in that growth, despite bans on slave importation during the last decades of the eighteenth century. By 1820, 44% of Georgia's population was black (DePratter and Howard 1980:45) and over 70%of the population in the area which would become Liberty and Long counties along the coast were African American slaves (Figure 14). Further inland, in the "Pine Barrens," the proportion of slaves dropped to less than 10% (Hilliard 1984:Map 30).

During the antebellum Georgia began to increase its economic share of the American export market. The forced removal of all Native Americans from the state in 1838 accelerated the settlement of interior lands (DePratter and Howard 1980:45). Already established river and road transportation networks were augmented by railroads which connected Georgia's major port city, Savannah, with other major urban centers within the state and region. By the time of the Civil War, railroads connected Savannah to Augusta, Macon, and Waycross. Waycross provided access to coastal Brunswick and Atlanta was accessed by both Augusta and Macon. Branch lines tied together Athens, Columbus, Albany, and Dalton in the northwest corner of Georgia.

With the advent of industrialization Georgia's economic base began to diversify. Textile mills, tanneries, lumber mills, and turpentine distilleries became established throughout the state.

In 1850, Liberty County had a population of 2,020 whites and 5,908 black slaves. The population, however, had increased by only 9½% from 1840. There were 244 farms, incorporating 38,563 improved acres and 303,518 unimproved

acres, for an average farm with 158 acres of improved land and the average farm was valued at $3,317. The county boasted 1,100 horses, 15,450 mules, 4,609 sheep, and 10,006 swine. Agricultural products included 2,116 bushels of wheat, 21,432 bushels of rye and oats, 297,614 bushels of corn, 72,318 bushels of Irish potatoes, 26,470 bushels of peas and beans, 40,225 pounds of butter, 24 hogsheads of cane, 11,640 gallons of molasses, 1,892,462 pounds of rice, 1,883 bales of ginned cotton, and 8,865 pounds of wool. The 1850 census reported that slaughtered animals were valued at $28,557. These figures, however, are misleading, since they lump together the large, wealthy rice plantations (which gave "Riceboro" in southern Liberty County its name) with the smaller, subsistence farms found further inland around the Taylors Creek area. For example, deeper in the "Pine Barrens," Tatnall County had a population of 2378 whites and only 831 black slaves. The county's 327 farms included only 14,244 acres of improved land, for an average of 43.6 acres per tract. These farms produced only 47,800 pounds of rice and 321 bales of cotton (DeBow 1854:210-217).

Turning to the Liberty County's industrial development, the county contained only $4,950 of invested capital and only 24 hands were employed. The annual product was estimated at slightly over $7,000.

The Civil War

The advent of the Civil War and its after effects would haunt the state of Georgia for years. Seceding from the Union on January 19, 1861, Georgia followed South Carolina, Mississippi, Florida, and Alabama into the folds of the confederacy. Georgia, especially, had taken the hard road and "soon found itself in a war from which it would not recover for decades" (DePratter and Howard 1980:46). Georgia's Alexander Stephens became Vice President of the new Confederacy and Robert Toombs was made Secretary of State.

The war began easily for Georgia. In January 1861 a band of Georgia volunteers sailed down the Savannah River to capture Fort Pulaski. At the same time Atlanta began to increase in importance. In the 1850s the town was described as a "sorry-looking place, always associated in my mind with rain and super abundance of red-clay mud" (quoted in Lane 1993b:x). The population increased from about 2,500 in 1847 to over 11,000 in 1860 to more than 16,000 before the war's end. The Confederates also easily seized the Union arsenal at Augusta and the mint at Dahlonega (DePratter and Howard 1980:46). Additional arsenals were established in Atlanta, Savannah, Macon, August, and Columbus. The state penitentiary at Milledgeville was converted into a rifle factory and the Athens Foundry became a cannon factory.

These gains were quickly offset by the Union blockade along the coast in late 1861 and the fall of Georgia's coastal island fortifications in March of 1862. Fort Pulaski on Cockspur Island was retaken by Federal troops in April of that year (for a review of the historical documents associated with this event, see Anderson 1995). The loss of Fort Pulaski effectively closed the port of Savannah to all those but the hardiest blockade runner. Cut off from the sea, new batteries were thrown up around the cities and paving stones were ripped up from the streets to serve as ballast to sink obstructions in the river.

Other coastal engagements included minor battles at Whitemarsh Island in April of 1862 and Fort McAllister in March of 1863 (Lane 1993b:xi). Additional Union incursions occurred in June 1863 when the bridge over the Turtle River near Brunswick was destroyed and in July when the coastal town of Darien was burned.

Except for Fort McAllister on the Ogeechee River, all of coastal Georgia was under Federal control. It wasn't, however, until early 1864 when Confederate troops began to build obstructions *above* Savannah that the city's citizens began to realize both that they were being abandoned and also that the war was lost.

In May 1864 the interior of Georgia felt the full brunt of the war (Lane 1993b:xi). That Spring, General Sherman left Chattanooga and began his long fight to the sea with an army of 100,000 Union troops (Figure 15). Following the

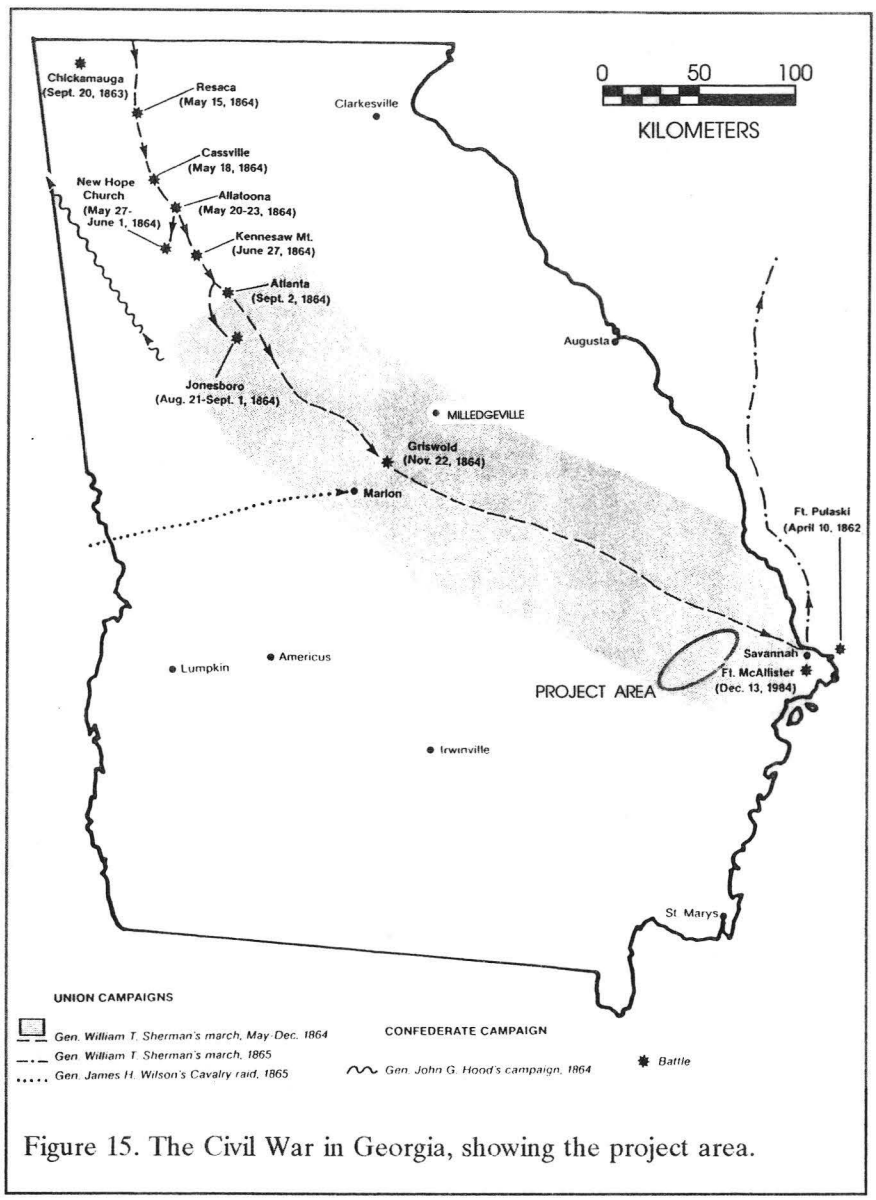


Figure 15. The Civil War in Georgia, showing the project area.

route of Western and Atlantic Railroad, Sherman faced Confederate forces of about 41,000 troops commanded by General Joseph E. Johnston and later by General John B. Hood. While initially stymied, Sherman managed to outflank the Confederate positions, forcing them into Atlanta's trenches. After forty days of bombardment, part of the Union forces swung south of the city, threatening Confederate supply lines to Macon. At that point, on September 1, Hood evacuated Atlanta. From May to September, 4,988 Union soldiers and 3,044 Confederates were killed in Georgia. Those hospitalized from malaria, typhoid fever, diarrhea, dysentery, measles, and other diseases accounted for an additional 46,000 Confederate troops and nearly 63,000 Union soldiers.

After taking Atlanta in September 1864, Sherman's route to Savannah lay open. He wrote his wife, "We have devoured the land. All the people retire before us and desolation is behind. To realize what war is one should follow our tracks" (Lane 1993b:xiv). By November 16th, Sherman was done with Atlanta and had to decide whether he would retreat to Tennessee or continue his march to Savannah. By taking Savannah, Sherman would be able to create a new base on the Atlantic coast which would decrease the length of his supply line (Nevins 1971:158). This would assist him in his move north to harass Lee's rear lines south of Petersburg. It was also Sherman's intent to live off the land and by doing so, destroy as much food, munitions, and infrastructure as he could, thus eliminating the threat posed by Johnson and Hood's wide ranging armies.

Sherman left Atlanta with 60,000 infantry and 5,500 cavalry. He would lose less than 850 men during his operations within central Georgia and the capture of Savannah (Nevins 1971:158). His troops covered an area approximately 96 km wide and 400 km long throughout the Georgia countryside (Nevins 1971:158). "Sherman's line of march followed the Georgia Central Railroad, covering a wide belt on either side, and east, of Louisville . . . between the Ogeechee and Savannah

Rivers" (Guernsey and Alden 1977:686 [1866]). Sherman's right wing:

> commanded by Major-General Oliver Howard, moved through Jonesboro, Monticello, Gordon, [and] Irwinton. The left wing under Major-General H.W. Slocum headed to Covington, Madison, Eatonton, [and] Milledgeville. Brigadier-General Judson Kilpatrick led a cavalry which struck toward Macon, fell back to Gordon and rejoined Sherman at Milledgeville (Lane 1993b:xvii).

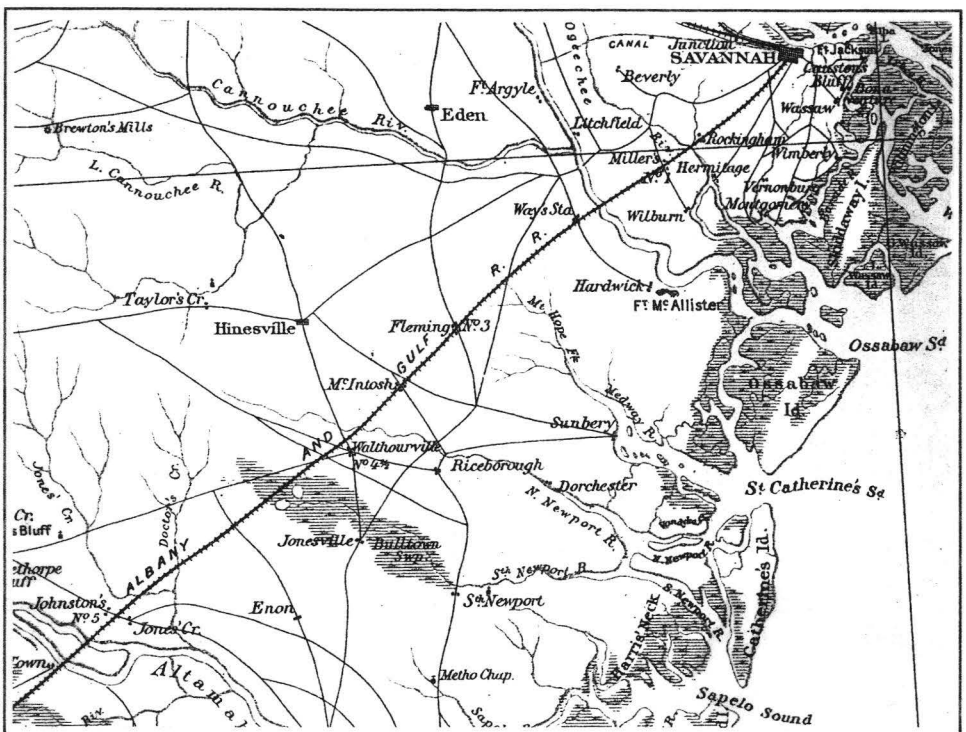


Figure 16. The project vicinity in 1865 (adapted from *Atlas to Accompany the Official Records of the Union and Confederate Armies*, Plate CXLIV).

By November 22 Sherman's army had captured the state capital in Milledgeville and had crossed the Ogeechee by the end of November (Figure 16). One account, of Mary Jones of Liberty County, expressed the anguish of local residents:

> Clouds and darkness are around us. The hand of the Almighty is laid in sore judgement upon us. We are a desolated & smitten people (Lane 1993b:220).

Sherman faced little resistance and finally captured Savannah from the west on December 21, one day after the city was abandoned by the Confederacy.

The damage done by Sherman's armies to Georgia's agriculture and industrial infrastructure in thirty-four short days would take decades to overcome. Sherman estimated the damage to the state during his campaign as "fully $100,000,000.00 one fifth of which had been of use to [the] army, and the rest shear waste and destruction" (Guernsey and Alden 1977:690-691 [1866]; Nevins 1970;159). Between Howard's right wing and Slocum's left wing, the Union army, during the campaign from Atlanta to Savannah, set free over 3,000 African American slaves, confiscated over 26,500 head of cattle, 6,171 horses and mules, 10.5 million pounds of grain and corn, 10.5 million pounds of fodder, over 43,000 bales of cotton, and destroyed over 310 miles of railroad to where "scarcely a tie or rail, a bridge or culvert," remained in central Georgia (Guernsey and Alden 1977:692 [1866]; Nevins 1971:159). Various support industries were also destroyed. These included "machine shops, turn-tables, depots, water-tanks, cotton gins and presses" (Guernsey and Alden

1977:692 [1866]). Brigadier-General Kilpatrick's operations would add 14,000 bales of cotton, 12,900 bushels of corn and 160,000 pounds of fodder to Howard's and Slocum's totals.

By April of 1865 the war would be over but, because of Sherman's army and its destruction, life, as it had been known to the residents of central and coastal Georgia, ended in December 1864. Sherman's march through Georgia, however, had other affects on history. As Sherman marched through Georgia, many slaves deserted their plantations and sought refuge with the Union forces. In what may have been a wise military decision, Sherman made a very poor political judgement, turning most of these freedmen away. Large numbers were re-enslaved by the remnants of the Confederate Army — creating a major political scandal for President Lincoln (Friedheim and Jackson 1996:132).

Lincoln dispatched Secretary of War Edwin Stanton to Georgia to investigate the situation. After meetings with a number of African-American ministers in Savannah, Sherman issued his famous Field Order Number 15, which set aside almost a half-million acres of captured Confederate land, dividing it into small plots for freed slaves. Although this approach satisfied the needs of the immediate political situation, as Willie Lee Rose discusses at length, the North would eventually turn their back on Southern blacks and relatively little of this acreage would actually be distributed (Rose 1964:328ff).

The combined force of Sherman, coupled with the increasing number of freed blacks and the use of black troops by the North, resulted in the call by Jefferson Davis, president of the Confederacy, for the recruitment of slaves into the Confederate Army, offering them both pay and freedom. This proposal was passed by the Confederate Congress in early 1865. As Friedheim and Jackson note, "the fact that the South was freeing African Americans in order to save the Confederacy was one last bit of dramatic evidence that its war to preserve slavery was all but lost" (Friedheim and Jackson 1996:133).

Reconstruction

The postbellum period within Georgia was difficult for the state and its residents. Economic recovery from a devastated industrial and agronomic base, as well as inter-related transportation systems, would affect Georgia's recovery until the 1890s. The problem was compounded by nationwide depressions that lasted from 1873 to 1878 (DePratter and Howard 1980:46).

While Sherman left Georgia in January 1865, it was June of that year before Federal authority was extended from Macon and Savannah throughout the rest of the state. In May 1865 President Andrew Johnson proclaimed James Johnson, a lawyer from Columbus, the provisional governor of Georgia. A convention of "loyal" Georgians repealed the secession ordinance, abolished slavery, and repudiated the Confederate debt in October 1865. A new governor, Charles Jenkins, was elected and the new legislature ratified the Thirteenth Amendment and passed additional laws to guarantee the liberty of the freedmen.

Congress, however, reacted angrily to Southern excesses and passed a military reconstruction act in March 1867. Georgia's new government was abolished and the state returned to military rule. State government was again reorganized, only this time there were even more blacks and fewer whites in the legislature.

In April 1868 Rufus Bullock was elected governor and in July a new legislature ratified the Fourteenth Amendment. The state capital was moved from Milledgeville to Atlanta. But by December 1869 Congress once again became outraged by the excesses of the Ku Klux Klan and re-established military rule, again "re-organizing" the state government. Under this third government, the Fifteenth Amendment was ratified and Georgia was finally readmitted to the United States in July 1870.

Economic and Political Reorganization

While the political future of Georgia was

in upheaval, an effort was made to restore some degree of the state's agricultural prosperity. Freedmen often returned to the plantations to work under white bosses rather than white owners, and were still tied to a task system. Owning no land, freedmen and landless whites formed the nucleus of a relatively new labor system of tenancy. This new labor system grew dramatically, rising from about 53% in 1890 to over 65% in 1910 and peaking at about 68% in 1930 (Coleman 1991:259). The number of farm units increased from 224,00 in 1900 to 310,132 in 1920, with the average size of the farm unit dropping from 117 acres to only 82 acres. While there were a variety of systems, tenants usually paid either a cash rental or became sharecroppers who divided their crop with the landlord in return for the ability to work a portion of the plantation.

Cotton continued to be the major focus of agricultural efforts — offering white land owners with their only hope for economic revival. Just as "King Cotton" drove the South to the Civil War, it served to nearly ruin any chance the South had to revitalize itself after the war. Until the 1920s over half of the total value of Georgia's agricultural production was wrapped up in this one product. This dependence on cotton was the result of a number of different factors. Kenneth Coleman, for example, notes that force of habit keep many farmers growing cotton — they simply didn't know any other crop. Many, he observes, didn't have either the education or financial resources to diversify (Coleman 1991:257). Of equal importance was that with small, and concentrated urban populations, markets for fresh produce were limited. This, coupled with the very poor transportation network crippled efforts to engage in truck farming until the Second World War. Even as late as 1930 only 6% of Georgia's farmers lived near paved roads.

The reliance on cotton, combined with the debilitating effects of the Civil War, created an intricate web of dependency was created between tenants, land owners, and merchants. After the Civil War the crop lien system emerged as the only viable source of short-term credit. By the 1890s the system had expanded to the point to trapping between 80 and 90% of Georgia's farmers. In order to obtain credit for planting, or sometimes for even living, a farmer obtained a lien on his ungrown crop from the furnishing merchant. These merchants, themselves living on very little hard cash, undertook to finance what were often risky farming efforts. Consequently they typically charged from 25% to as much as 75% interest on their loans under the crop lien system.

From the standpoint of corruption, Republican rule during Reconstruction was likely no better, or worse, than Democratic rule either before or afterwards. In Georgia, for example, a white Reconstruction official pushed the state's newly formed public school system to purchase books published by the New York Harper Brothers firm, in exchange for a $30,000 "loan" (Friedheim and Jackson 1996:234). While the same types of fraud were seen, regardless of political affiliation, even the hint of corruption played into the hands of those opposing Reconstruction.

Although the freedmen did exercise their voting rights in 1867 and 1868, they never dominated the Georgia political scene during Reconstruction. Threats of violence by the Ku Klux Klan eliminated any real black influence and by December 1870 the Democrats won overwhelming control of the state legislature. By 1873 this white legislature effectively eliminated virtually all of the advances made by the black electorate by extending residency requirements for state and county elections.

Although the 1870s and 1880s were a period of economic revitalization, energy, and optimism, conditions in rural Georgia changed little, if at all. While many of the state boasters forecasted a "New South" of reconciliation and reform, much of the state remained locked in poverty and bigotry nurtured by years of slavery. In 1882, Oscar Wilde wrote from Augusta:

> I write to you from the beautiful, passionate, ruined South, the land of magnolias and music, roses and romance, picturesque, too, in her failure to keep pace with your keen Northern pushing intellect, living chiefly on credit and on the

> memory of crushing defeats (quoted in Lane 1993a:xii-xiii).

In spite of the improvements seen in the urban areas, Georgia remained rural, and poor. In 1900, 85% of the state's population still lived on farms or in small villages and 60% continued to work in agriculture. Further, the state's per capita income showed no increase between 1880 and 1900 (Lane 1993a:xiii).

Cotton production on late nineteenth century tenant farms was little different from that practiced on antebellum plantations. The planting, cultivation, and picking was labor intensive, with the entire family, and often a mule, devoting their entire energies to this single minded pursuit. Yields were low and debt continued to be heavy.

Lane (1993a:xiv) points out that debts which could be repaid by a single bale of cotton in 1880 required two bales only five years later in 1885. A major financial panic hit the country in 1893, followed by a nearly seven year depression. Cotton prices plunged to less than 5¢ a pound and it wasn't until 1898 that the recovery drove prices up to 7½¢ a pound. These hard times forced furnishing merchants to severely restrict lending, even based on crop liens. This caused some crop diversification, but little lasting improvement.

Cotton prices did not increase significantly until the early twentieth century, when there was a twenty year period of relative prosperity. Farmers turned their backs on diversification and returned to "King Cotton." The 3.5 million acres planted in cotton in 1900 were increased to over 5 million acres in 1916.

Immediately before the First World War, Georgians in general had greater prosperity than they had seen since before the Civil War. The expansion of Rural Free Delivery and the increase in automobiles and telephones contributed to this appearance of prosperity and well-being (Coleman 1991:261).

The introduction of the boll weevil between 1915 and 1917 (Hodler and Schretter 1986:86), coupled with increasing competition further north and even outside the United States, sent prices plummeting. Cotton prices dropped from 35¢ a pound to 17¢ in a single season. Cotton yields fell by a third to nearly a half (Coleman 1991:263).

In spite of the spread of tenancy, Bryan, Liberty, and Long counties continued to have low tenancy rates. For example, in 1930, at the height of tenancy, these counties all had less than 35% tenancy, while counties just slightly further inland had ranges up to 80% (Hodler and Schretter 1986:86). The project area continued to be dominated by small, owned farms.

What industrial improvement the state saw focused on very basic extractive industries — cotton, lumber, and paper mills — which plundered the natural environment and paid very low wages. One enterprise in particular — cotton mills — was Georgia's leading industry throughout the half-century from 1890 to 1940.

Trade unions were virtually unheard of prior to about 1890. During the first half of the twentieth century most union activity focused on skilled trades. Textile workers used strikes on several occasions in an effort to organize. The most notable occurred across the state during the summer of 1934. Eventually the state militia was called in to break the strike and union organization in the mills would not be successful for another two decades.

The railroads, one of the few truly successful industries in Georgia, had expanded dramatically by 1899, although much of this expansion was in central and northern Georgia — there seemed to be little interest in opening up the Pine Barrens. The main line still connected Savannah with McIntosh, Walthour, Johnson, and Jesup on the southern edge of the project area, where lines then extended north, south, and west (Hodler and Schretter 1986:171). The bulk of the Pine Barrens wouldn't be readily accessible until at least 1939 (Hodler and Schretter 1986:172).

The Rise of Populism and Segregation

The Democrat Party, popular with Atlanta businessmen, dominated Georgia's recovery. Farmers, unhappy with the shift toward "big business" and the urban economy, were easily defeated by Democratic appeals for unity against the threat of black domination, at least during the 1880s. By the 1890s, however, the power of the rural communities was increasing. In 1890 the Farmers Alliance unseated conservative Democrats in six of the 10 Congressional Districts, took control of the party, and easily won both the governorship and the legislature (Lane 1993a:xv).

Faint with power, these populists bolted from the Democratic party and began an appeal to the common interests of all farmers — black and white alike. Urging economic reform and appealing to the discontent of both poor blacks and whites, the leader of this movement, Tom Watson, drove the conservative Democrats to outlandish displays of election fraud. Blacks (and whites) were provided free liquor and barbecue, then driven to polling places. Using the tactic of voting early and voting often, the Democrats won landslide victories against the populists — garnering more votes in some precincts then there were registered voters.

The Democratic response to Tom Watson was borne of fear. Black illiteracy had dropped from 92.1% in 1870 to 52.4% in 1900. By the early 1900s blacks owned 1,400,000 acres of property valued at over $28,000,000. Simply put, in a single generation freed slaves had managed to increase their land holdings by a million acres and reduce their rate of illiteracy by half. The white population, still yearning for a world of "darkies" who knew their place, viewed this kind of progress with alarm. Lane recounts one Georgian who put the view of the white population very plainly:

> As long as a Negro keeps his place I like him well enough. As a race, they are vastly inferior to whites and deserve pity. This pity I am willing to extend as long as they remain Negroes, but the moment a nigger tries to become a white man, I hate him like hell (quoted in Lane 1993a:xvii).

As the agrarian empire of Georgia began to collapse, and white and black people began to move into the cities, crossing traditional and accepted lines of behavior, segregation sprang up almost overnight. Georgia's first statewide segregation law was passed in 1891, with additional laws enacted in 1897, 1905, and 1908. Cities also began to pass municipal ordinances against blacks (for an overview, see Kennedy 1990).

As the economic conditions of the state worsened there was a dramatic outbreak of lynchings, which Lane suggests reflected the "poverty and frustrations" brought on by the collapse of cotton and the failure of populist reforms (Lane 1993a:xix). Between 1889 and 1918 Georgians lynched at least 386 people — more than any other state — and 93% were blacks.

The white populists, believing that it would be necessary to shackle blacks in order to achieve their own economic freedom, engaged in one of the dirtiest campaigns ever seen in Georgia. In the aftermath of vitriolic oratory, Atlanta exploded in a four-day race riot. The new governor of Georgia, Hoke Smith, pushed through a constitutional amendment to disenfranchise the black in 1908, making Georgia the seventh Southern state to do so. As Lane observes, "a half century after emancipation, Georgians had put the black back 'in his place'" (Lane 1993a:xx; see also Ayres 1995 and Du Bois 1992).

At first slowly, and then in very large numbers before and after the First World War, blacks engaged in the "Great Migration," moving out of the South. There was a shift from south to north, rural to urban, and from agricultural to industrial.

World War I stimulated some diversification of crops, but had few other economic impacts. It certainly did not solve any of Georgia's economic or social ills. Following the war, a series of economic crises struck. Cotton prices continued to fall, the boll weevil continued to advance, and cotton was taken out of production. The state's farm population declined

by 375,000. Finally, as if to seal the fate of Georgia, the Great Depression hit in 1929.

The Depression and the Modern Era

The New Deal agricultural policies of the 1930s to some degree helped large farms, but small farmers and especially tenants continued to suffer. Farms were abandoned as the migration to the cities continued.

One of more successful programs for Georgians was the establishment of the Federal Land Bank system, which served to undermine the crop lien system by providing affordable credit (Coleman 1991:265). Another major change in the lives of the ordinary Georgia farmer was the creation of the Rural Electrification Administration in 1937. Prior to this 97% of the state's farmers lacked electrical service. By 1950 forty-three cooperatives had been created and most of the farms in Georgia were electrified.

While causing much hardship on tenants and sharecroppers, the Depression and the associated government programs also served to break "King Cotton's" monopoly. Tobacco, which was already the state's second most important crop by 1927, doubled in acreage by 1939. The 1930s also saw Georgia assume in lead in national peanut production. Pecan production increased and there was also a steady increase in the commercial production of tomatoes, beans, cabbage, cantaloupes, and other truck crops.

It was World War II, as much as any New Deal program, which drug America, and Georgia, out of the Depression. Military bases pumped federal dollars into the state and war production expenditures encouraged even further economic development (Coleman 1991:339). Per capita income would jump from about $350 in 1940 to more than $1,000 in 1950. Most of this growth was directly attributable to the rapid growth of industry and manufacturing.

Fort Stewart, created in June 1940 with the purchase of 2025 ha, was initially called Camp Stewart and was intended to serve primarily as a training facility for National Guard units being inducted into the regular army (Thomas et al. 1995:204). The acreage was quickly expanded, so by 1941 the base incorporated 60,750 ha. This appears to have displaced upwards of 6,000 people and 1,500 families (Thomas et al. 1995:207).

During the early years of World War II the base was used primarily for anti-aircraft training. By late 1944 its function shifted to general troop training and by 1945 the focus was on training cooks and postal workers. In July 1946 Camp Stewart, as it was called, was deactivated. With only a skeleton force of military and civilian personnel stationed there, the base fell into disrepair and was used primarily as a National Guard summer camp (Thomas et al. 1908).

In 1953 the base's function shifted to include the training of tank units, although National Guard units continued to use the camp during the summer. Peaks in activity occurred during the 1961 Berlin Airlift and the 1962 Cuban missile crisis. During the Vietnam Conflict the base was used by the Aviation School Element and became a U.S. Army Flight Training Center.

After Vietnam the base came close to closing, but was eventually saved by the decision to organize an infantry brigade and division. Thomas et al. note that the First Brigade, 24th Infantry Division became the first unit of this reorganization to use the Fort Stewart facilities (Thomas et al. 1995:209).

Taylors Creek

Taylors Creek is a small community located in interior Liberty County, Georgia, south of Canooche Creek, north of Taylors Creek, and west of the confluence of the two (see Figure 5). It was established on land originally granted in 1760 to two brothers, James and William Taylor (Yarbrough and Yarbrough 1986:3). Although they did not stay, others came west and settled in the area and by 1790 Taylors Creek was established as a small frontier community (Yarbrough and Yarbrough 1986:4). It would continue to exist until 1941.

The history of Taylors Creek, Georgia is

similar to that of many dead towns established within the Coastal Plain of South Carolina and Georgia during the eighteenth century. It is also similar to a number of towns that, once established, survived into the nineteenth and twentieth century only to be removed from their locations in the name of national defense. The fact that Taylors Creek shares similarities with these two types of settlement lends itself to comparison. Childsbury Towne, located on the western branch of the Cooper River in Berkeley county, South Carolina, was established during the early eighteenth century and survived as a viable socio-economic entity into the nineteenth century (Barr 1996). The towns of Dunbarton and Meyers Mill, South Carolina, established during the early nineteenth century remained viable into the twentieth century, only to suffer a similar fate as that of Taylors Creek.

Colonial Taylors Creek shares certain similarities with colonial towns established in the South Carolina Coastal Plain. Much like the colonial towns of Childsbury (Barr 1996) and Dorchester (Barker 1993), there were a number of social, economic, and transportation factors affecting where and why Taylors Creek was established. Socially, Taylors Creek "provided a place for communal interaction" within an area of dispersed settlements (Barr 1996:18). Economically, Taylors Creek was established in an area where "dispersed settlements and high production values" (Barr 1996:18) would play a pivotal role. The town's location, along the Sunbury to Greensboro road, completed in 1790 (Yarbrough and Yarbrough 1986:10), placed it along one of the earliest east-west transportation routes within colonial Georgia. As well, mid-twentieth century Taylors Creek shared certain similarities to the towns of Dunbarton and Meyers Mill, South Carolina. Although established much later than Taylors Creek, these towns were viable entities until the early 1950s and were removed by the United States Government for defense purposes.

Social needs such as religion and education, the economic advantage of good crop lands, and a reliable transportation system which served those social and economic needs were all factors in the town's formation. The functional aspects of these social, economic, and transportation factors belie the town's size (Barr 1996:13-14). Numerous studies, conducted over the last 20 years, have been concerned with the rise of settlements (Barr 1996; Ernst and Merrens 1973; Lewis 1984, 1985). These studies have determined that there are multiple factors affecting when and where small historic communities were established. Quite often size and economics are used to define the significance of these communities (Coclanis 1989). Others have found that a combination of social, economic, and transportation factors may be a better indicator of a settlement's significance to local and regional populations (Barr 1996; Ernst and Merrens 1973; Lewis 1984, 1985). The significance of Taylors Creek to the history of Georgia may be defined by these three factors.

Ernst and Merrens studied the process of urban development within the back country of mid-eighteenth century South Carolina. They suggest that this development was tied to the economic landscape of a particular place and time (Ernst and Merrens 1973:557). As settlements they should be defined "in relation to the structure and function" of the economic landscape in which they emerged (Ernst and Merrens 1973:565). A major aspect of this economic function is the export of locally produced commodities in exchange for finished goods imported into the community from regional or worldwide centers of production. They suggest that petitioners from these towns considered their "settlement in the context of the commercial development . . . as a whole and were identifying the role they could play in larger trade patterns and linkages" (Ernst and Merrens 1973:561).

Most importantly, Ernst and Merrens suggest that small towns are significant because of their functional aspects as opposed to their size, structure, or form (Ernst and Merrens 1973:557). This is because "urban form and urban function often diverged" (Ernst and Merrens 1973:555, 559-560). The functional aspects of Taylors Creek were much more extensive than the size of the town itself would indicate.

To further explain settlement Ernst and

Merrens developed a hypothesis that denotes certain non-residential buildings within the community as "key structures" which "symbolize the role played by the settlement in serving an area much more extensive than the town itself" (Ernst and Merrens 1973:560). Examples of key structures within a community might be churches, inns, schools, taverns, and mills. In Taylors Creek there were a number of key structures which historically existed within the town throughout its life. These included three churches, a school, post office, cotton mill, turpentine distillery, and a number of general stores. The function of each of these key structures denotes community, both socially and economically.

Although economics are an important issue in settlement, equal weight should be given to the study of inter-related social and transportation factors. The reasons behind a settlements development are varied and multi-faceted. Why these towns became established cannot simply be explained by one factor such as economics. Social and transportation factors must be considered when attempting to determine the significance of a small settlement. No matter what the purpose, social integration takes place wherever people reside or gather. This integration may or may not be the direct result of local economic factors but, is facilitated by an established transportation network of roads, rails, and/or rivers.

The exclusion of size as a viable marker for a settlement's significance allows the incorporation of important social factors. Size must be excluded because communal interaction needs few, if any, structures for a location to be considered socially significant. Some socially significant places may not contain any structures at all. Examples of locations where socially important meetings took place with a minimal amount of structures may be found in the use of grange halls and for rendezvous as social and economic meeting places. Both were common during the settlement of the mid-nineteenth century west. The fact that Taylors Creek remains socially important to the town's former residents is an example of how a location with no structures remains socially significant.

By the mid-nineteenth century, Taylors Creek was well known for its cotton and lumber farms and its strong religious community. It was not until the advent of the railroad in the late nineteenth century that the economic importance of Taylors Creek began to decline. By the mid-twentieth century, the area in which Taylors Creek was located became increasingly important to the United States government. Much like the small communities of Dunbarton and Meyers Mill, South Carolina, where the United States Department of Defense required the use of their land for the establishment of the Savannah River Nuclear Plant, the United States Department of Defense required the area in and around Taylors Creek for the construction of Fort Stewart. These actions, taken by the United States military, caused the demise of the settlement. Interestingly, although a vast majority of the settlements' buildings were dismantled by the United States army in 1941, many of the social aspects that denote community remain to this day.

It must be noted that settlements grow, falter, and decline due to the competitive nature of settlement. Quite often this decline is based upon a dynamic transportation infrastructure and changes within the local economic base related to changing conditions within regional or world markets. Also, settlements exhibit an inherent evolutionary nature (Barr 1996:156-157). Taylors Creek, although important locally, became much more significant regionally following the Civil War and the decline of neighboring Midway. Changes within the local transportation systems, the construction of rail lines, which by-passed the community, along with the decline and rise of neighboring competitive settlements, such as Midway and Hinesville, would have eventually led to the demise of Taylors Creek. Yet, because of the paradigmatic shift along its evolutionary course Taylors Creek ceased to exist long before the local and regional community was prepared for it to. Although the region has adjusted to new communities which filled the religious and educational void left by the settlement's demise in 1941, local residents still see the past and consider when the town was important to themselves and their children. As a community, Taylors Creek still exists within the mental template of its former

residents.

Colonial and Antebellum Period

By the 1780s and early 1800s the town of Taylors Creek became occupied by "settlers from Bryan and other Georgia counties" as well as Massachusetts, Maryland, Virginia, North Carolina, and South Carolina (Yarbrough and Yarbrough 1986:4, 11, 103). Taylors Creek is generally overlooked on maps from the eighteenth and nineteenth century, appearing commonly by the Civil War (see Figure 15).

The original settlement of Taylors Creek was located where the Sunbury to Greensboro road, completed about 1791-1792, crossed Canoochee Creek. By the turn of the century and into the early 1800s:

> the network of roads at Taylors Creek spread in every direction except south. By vehicular route one could travel to the Liberty county coast, to Savannah, to the northern part of the state, or to Macon in its very heart. Early Taylors Creek became a gateway, and this gateway function was greatly responsible for the community's early growth and importance (Yarbrough and Yarbrough 1886:10-11)

Unfortunately, Taylors Creek was subjected to periodic floods which caused the community to become, literally, an island community (Wyman May, personal communication 1996). According to Bird and Paul Yarbrough (1986):

> the creeks themselves were not spectacular. Taylors, the smaller creek, was little more than a trickle and subject to drying up completely under August suns. Somewhat larger Canoochee could only be moved to anger by a torrential rain (Yarbrough and Yarbrough 1986:xvi).

These periodic floods may have been the reason for the disruption of the community in the mid-nineteenth century. Initially the town church and cemetery were located near the wooden bridge where the Sunbury to Greensboro road crossed Canoochee Creek (Yarbrough and Yarbrough 1986:130-131). In 1841 the Methodist Church was removed from the lowland areas near the bridge and moved to a slight rise in the geographical landscape. This location would eventually become the intersection of the New Hinesville Road, Hencart Road (Old Colony Road to Savannah), and the Hinesville to Pembroke road.

The Civil War

Liberty County and Taylors Creek were both variously affected by the advent of war during the mid-nineteenth century. Although the war did not affect inland Liberty County until Sherman's march to Savannah, the coastal regions of the area did play a minor part. Approximately 124 of Liberty county's native sons served in the Confederate States army, forty-one of which are interred in Taylors Creek Methodist Cemetery (Yarbrough and Yarbrough 1986:39-40, 116). It was only after Sherman began his march on Savannah that the war truly came home to Liberty County.

At Brigadier-General Judson Kilpatrick's arrival in the county, there were very few local troops to block his movements. With the withdrawal of Confederate commander Lt. Colonel Arthur Hood across the Altamaha River, south of Taylors Creek, the area between the Altamaha and Savannah River was virtually left open to the will of the Union army and "for nearly six weeks this country was a no-man's land" (Yarbrough and Yarbrough 1986:32).

General Kilpatrick based his operations out of Midway Church. From there he would send raiding and foraging parties to loot the local plantations, farms, and hamlets within Liberty County. Although the Methodist Church in Taylors Creek was spared, possibly because it carried a Masonic emblem over the door, two other churches in Liberty County were burned to the ground.

Reconstruction

Prior to the Civil War "Midway with her older and more advanced society had dominated the religious and cultural life of the county" (Yarbrough and Yarbrough 1986:31). An area of absentee plantation ownership, the loss of Midway's slaves at the end of the war made it almost impossible for plantation based agricultural production to continue. Much like McIntosh, Flemington, and Walthourville, Midway would decline and become virtually abandoned (Yarbrough and Yarbrough 1986:31).

With the decline of Midway in Liberty County, Taylors Creek began to fill a social and religious void. The Methodist Church and Campground, already well known, became more prominent (Yarbrough and Yarbrough 1986:31). Doctors, lawyers, and educators came to reside within the community. The socio-economic function of the settlement began to evolve once again.

The primary function of Taylors Creek during this period seems to have been that of a regionally well known religious community and educational center. The Methodist church retreat, located northeast of the community (Wyman May, personal communication 1996), would draw religious members of the Methodist faith from throughout the South. The reputation of the local school, the Liberty Institute, would draw new people into the community for their children's educational needs.

The Modern Era

The community of Taylors Creek continued to grow throughout the nineteenth and early twentieth centuries. Its stature as both an area of turpentine production and general farming, as well as a religious and educational community, assisted in its growth. Inter-marriage within the community defined it as more of an extended family. Taylors Creek was a viable settlement with a strong family community and a number of small industries such as a sawmill, a water powered grist mill, turpentine distillery, and a cotton gin (Yarbrough and Yarbrough 1986:xvi).

Taylors Creek also contained a number of key structures during the first half of the twentieth century. These included two churches, one white and one African American, a post office, magistrate's office, school, and a number of general stores. All existed to serve the social and economic needs of the general community.

The town is shown in detail on the 1918 War Department Hinesville topographic sheet, a portion of which is reproduced here as Figure 17. The map shows the small community to consist of two churches, a school, and a diffuse scatter of nearly 40 structures.

The 1950 U.S.G.S. 15' Hinesville topographic sheet (Figure 18) shows that the community has been reduced to nothing more than a name. The Taylors Creek Methodist Cemetery is shown, but not named. Only two structures, one at the western edge of the town and the other at its southern edge were still standing. All the rest had been removed by the military.

Although Taylors Creek "was never incorporated because its loose boundaries ranged no more than two or three miles from the juncture of the creeks" (Yarbrough and Yarbrough 1986:xvi), similar to many other small southern communities there was another social aspect to the town of Taylors Creek; an African American component. Little is written concerning the presence of African Americans other than that found in personal memoirs and the notation that Taylors Creek "had not been so dependent [as the town of Midway] on slave labor" (Yarbrough and Yarbrough 1986:5). Yet, within the settlement of Taylors Creek there existed the community of Pleasant Grove.

According to Wyman May (personal communication 1996), Pleasant Grove Church and cemetery were the social loci of the African American community in Taylors Creek. On approximately 7 ha of land fronting Hencart road the church, cemetery, school, and Masonic lodge were established.

Pleasant Grove is rapidly losing its designation as a communally separate, yet inter-

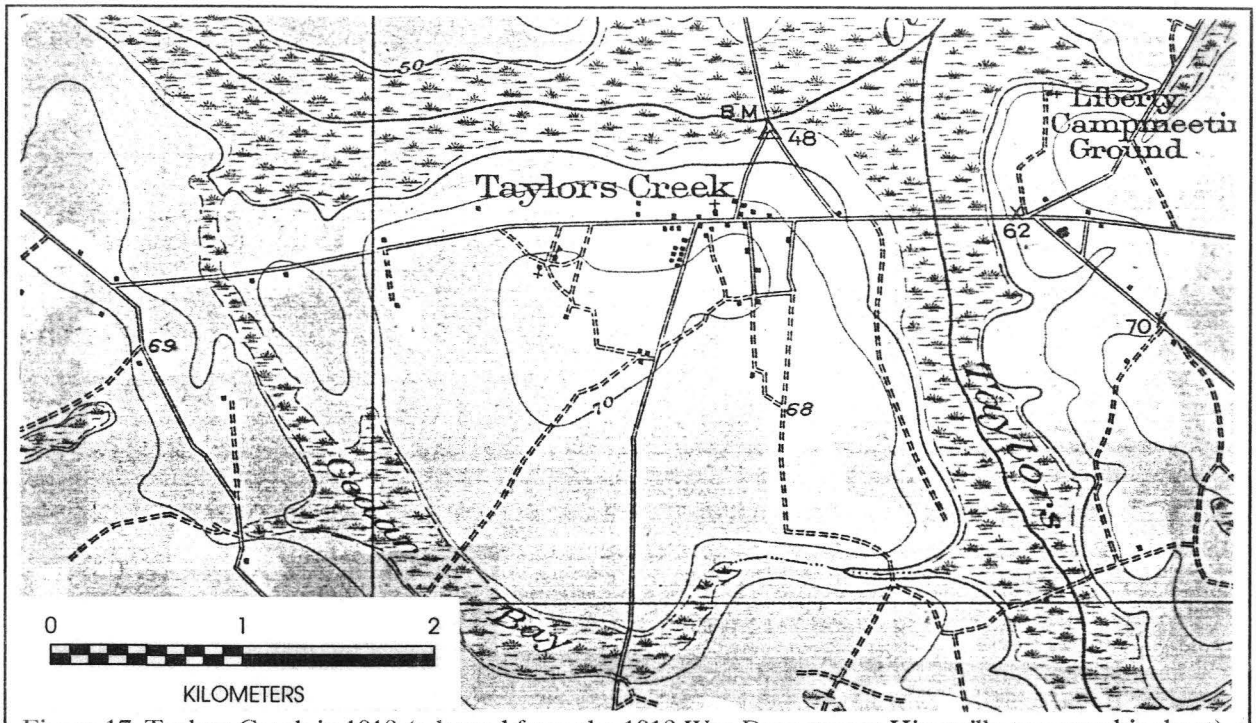


Figure 17. Taylors Creek in 1918 (adapted from the 1918 War Department Hinesville topographic sheet).

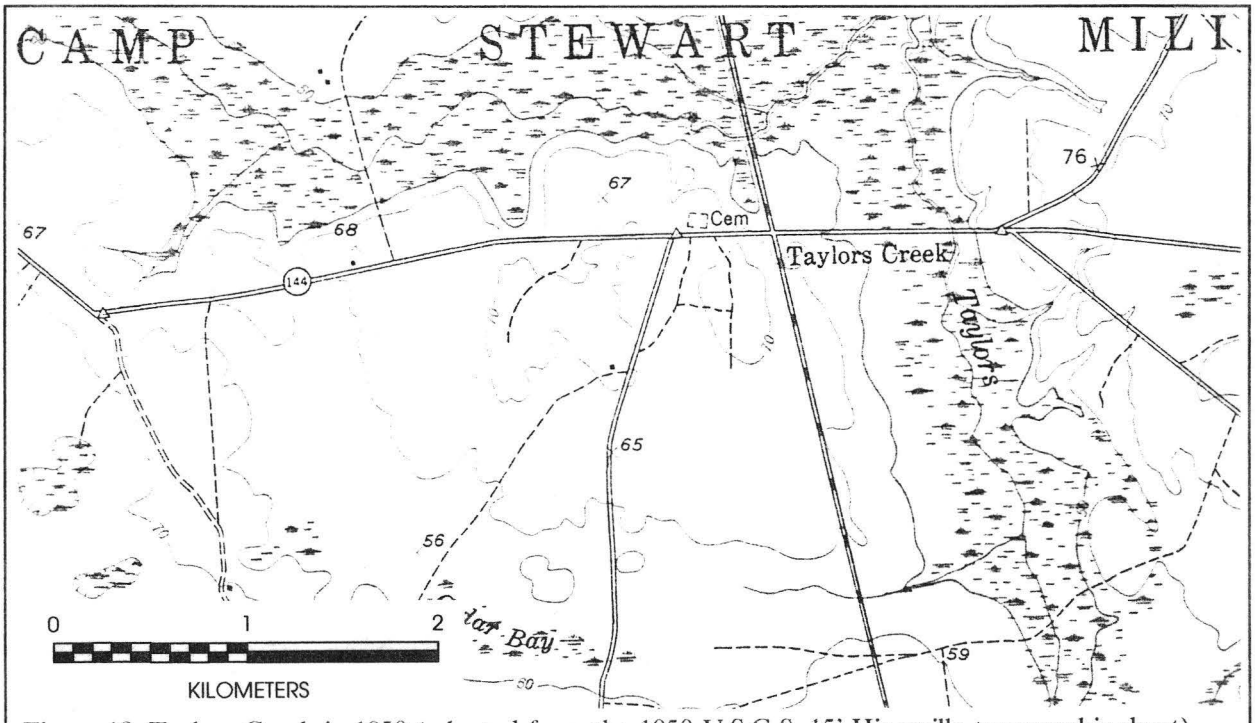


Figure 18. Taylors Creek in 1950 (adapted from the 1950 U.S.G.S. 15' Hinesville topographic sheet).

connecting, entity within the settlement of Taylors Creek. According to the Fort Stewart base map the location of the African American cemetery known as Pleasant Grove is renamed the Philadelphia Cemetery. It is unknown as to why the cemetery is called by this name, but according to ethnographic accounts (Wyman May, personal communication 1996) and historical accounts (Yarbrough and Yarbrough 1986), the African American cemetery within the community of Taylors Creek is known as Pleasant Grove Cemetery. Although segregation may be evident within the mid-twentieth century religious community the historic map of Taylors Creek (Yarbrough and Yarbrough 1986:130-131) indicates that this community was more integrated for its time (1941) than many areas of the South.

Although small in size, Taylors Creek served a greater function than its size and population would suggest (Barr 1996, 1995). A combination of factors allowed Taylors Creek to become a significant entity within the local and regional socio-economic landscape. The forced move in 1941, effected by a need of the United States war effort against the Axis powers, affected the community in a number of ways. As an inter-related community of divergent peoples, Taylors Creek was torn asunder.

RESEARCH STRATEGY AND METHODS

Research Goals

The primary goals of this survey were to identify, record, and assess the significance of archaeological sites within the 563.2 ha JAECK drop zone and the 283.40 ha Taylors Creek survey area. As stated earlier, this work is being done in order to fulfill compliance with the National Historic Preservation Act (Public Law 89-665, as amended by Public Law 96-515) Guidelines for Federal Agency Responsibilities, under Section 110 of the National Historic Preservation Act, Army Regulation AR 420-40, and 36CFR800 (Protection of Historic and Cultural Properties).

Preservation efforts offer important economic, tourism, and education opportunities (see, for example, Rypkema 1990). Yet, clearly these are of little consequence to a government agency whose mission statement is national defense. Clearly, in such a case, the motivation is compliance with law. In spite of this, preservation offers intangible benefits, such as external benefits to society, which are worthy of careful consideration. U.S. Representative John Lewis from Georgia has remarked that, "it is not enough to learn from history or a movie, we must make sure that these precious pieces of our history are preserved." Knowing and understanding our past, many have argued, creates better citizens and hence a better society.[1] Citizens take greater pride in their city's, county's, and country's historical achievements. This pride naturally boosts morale and enhances civic participation. Native American and African American groups can rightly take pride in the expression of their unique ways of life, their history, and their contribution to our Nation. Exploration of our past reveals the heights of which humanity is capable. The study supplies continual inspiration and promise. The exploration of the past makes it possible to keep on seeing, thinking, and reflecting afresh — and this freshness and willingness to explore the past is essential to the democratic process. Exploration of the past may offer social commentary by providing new insights into past lives, or how society reacted to past pressures. It may even help us to better understand the failures of past.

It is also important that a country which has so strongly advocated educational improvement and reform should also understand the irreplaceable role that historic and prehistoric resources can play in teaching us about our heritage. It is essential that the next generation of citizens understand the stories hidden within our archaeological sites and in our historic churches, houses, factories, and communities. The ability to reach out and touch the past, forming a strong and clear link between yesterday and today, offers an unforgettable understanding of another way of life and helps our children better understand the fabric of life in our country. By exploring and emphasizing African American and Native American history it is possible to strengthen the understanding that our heritage is the combined history and culture of all of our citizens.

Oftentimes historic preservation, through the exploration of the past, may challenge rather than reassure, and provoke rather than sooth. Archaeological research, in many ways, offers much more than history ever can since history is largely written by the well educated, the wealthy, and the white. History tends to ignore the poor, the underclass, the illiterate, making them invisible people. History is what others want us to know, archaeology offers the opportunity to explore the reality of the past without the filter of subjectivity added by some, perhaps many, historical accounts.

[1] One of the earliest discussions of preservation for patriotic reasons is Charles B. Hosmer, Jr.'s *Presence of the Past*, a history of preservation in America up to 1926. He reveals that long before even the Civil War, America's need to create a national identity manifested itself in efforts to preserve historic sites.

Archaeology offers the potential to explore the lives of African American slaves that are largely known only through the dry history of white slave-owner account books and plantation diaries. While slave owners were concerned with how many acres a slave could hoe, or how much they had to be fed, the owner was rarely interested in how slaves lived, died, ate, or made their house a home. Likewise, our understanding of Native American groups in the historic period is dominated by traders and occasional visitors who had clear reasons for coloring their accounts. Archaeology offers the only opportunity for better understanding the reality of the past.

Part of this reality is also the understanding that history is not made up of single events, or great people, or unique ideas alone. As Tony Wrenn and Elizabeth Mulloy explained nearly two decades ago:

> Events are only punctuation marks; the process itself is history. It takes days and days of irritation and heat and insult, and grievance to provoke a revolution. A bicentennial commemorates 200 years — not just the years on either side of a hyphen (Wrenn and Mulloy 1976:15).

History is fluid and on-going. It involves both the great and the small. Archaeological studies help us better understand both the continuum and also the importance of the common person.

Many also point out that historic preservation is a "merit good" — simply because preservation is an important part of life, its perpetuation and dissemination merits government support. Like food, shelter, and education, some feel that everyone should be entitled to a minimum quantity and standard of historic preservation experience, whether that be exposure to historically significant buildings, a better understanding of past industrial technology, or the ability to explore Native Americans who lived thousands of years ago. The government allows preservation efforts to be available and emphasizes their importance by support of preservation on government facilities and land. Inherent in this is the assumption that, without subsidy, the cost of historic preservation is too high relative to most consumer's incomes. It follows that there is an intrinsic wrong in making our history available to only the richest 20% of the population, who are likely to represent a very biased cross-section of our society.

In addition to the legally mandated goals of this study, in an effort to expand the base of our socio-cultural knowledge, we identified and incorporated a range of secondary goals. These reflect an effort to address at least some of the issues identified as important to the discipline. These included both research issues, whose answers will help to better explore and refine our understanding of the past, and methodological issues, whose answers will help to better and more cost-effectively undertake survey and preservation efforts.

The survey of the JAECK Drop Zone and the Taylors Creek area offers a unique opportunity to intensively explore the archaeology of a section of Georgia which has received relatively little in-depth archaeological attention. It was found that both survey areas contained prehistoric and historic sites. The JAECK Drop Zone contained small prehistoric hunting camps as well as historic dispersed settlements. The Taylors Creek area contained evidence of prehistoric occupation, as well as historic dispersed settlements along with a small community, Taylors Creek.

The combination of evidence recovered from these surveys offer an opportunity to study a number of diverse topics concerning the prehistoric, colonial and modern era. Each of the sites discovered represents some form of human occupation. This may range from a prehistoric hunting camp or seasonal occupation to a contact period frontier settlement, to a mid-twentieth century rural settlement. The study of recovered archaeological data provides a time frame for these sites, thus the temporal duration of these settlements. The functional purpose of these sites may become apparent from the study of tool assemblages or from personal items. They also offer the chance to determine changes in land use patterns over an extended period of time.

This survey has also allowed the critical study of archaeological methodology. Questions related to the effectiveness of 30 m transects in the discovery of prehistoric and historic sites may be addressed. Would other methodologies be more effective in locating prehistoric sites as opposed to historic sites? Should a different methodology be used when attempting to determine patterns and loci of dispersed settlement as opposed to communal settlement? Each of these questions addresses concerns related to surveying singular geographical areas in which multiple habitation components are evident. Although some of these topics are addressed within this report, many of them will need careful consideration and more data to make determinations.

No major analytical hypotheses were created prior to the field work and data analysis, although certain expectations regarding the secondary goals will be outlined in these discussions. The research design proposed for this study is, as discussed by Goodyear et al. (1979:2), fundamentally explorative and explicative.

As stated above, the primary goals of this survey were to identify, record, and assess the significance of archaeological sites within the survey tract. The latter aspect involves the sites' eligibility for inclusion on the National Register of Historic Places, although Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead compliance agency, the United States Army, in consultation with the State Historic Preservation Officer at the Georgia State Historic Preservation Division.

The criteria for eligibility for the National Register of Historic Places is described by 36CFR60.4 and states that:

> [t]he quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

It is generally accepted that "the significance of an archaeological site is based on the potential of the site to contribute to the scientific or humanistic understanding of the past" (Bense et al. 1986:60). Butler suggests that the only valid measurement of significance must be based on what he calls the "theoretical and substantive knowledge of the discipline" at any particular moment in time (Butler 1987:821). While the use of this approach over that developed by Glassow[2]

[2] Glassow's (1977) approach to evaluating site eligibility is through the use of five properties: site integrity, site clarity, artifactual variety, artifactual quantity, and site environmental context. These qualities stress properties of the archaeological record. *Integrity* refers to the degree of preservation or amount of in situ remains present at a site. It relates to the condition and amount of archaeological artifacts, ecofacts, and features found at a site. *Clarity* indicates how well the strata or subsurface features may be distinguished. *Variety* refers to the qualitative variability in the archaeological remains found at a particular site. *Quantity* refers to the frequency or density of the artifacts or subsurface remains and it is in many ways one of the easiest

(1977) has been suggested, Butler himself acknowledges, "we cannot foresee future research questions, and we may not possess the theory to interpret and understand all that is present" (Butler 1987:822). At this point in time it seems essential to recognize the importance of asking the right questions at the right sites, not limiting the number of sites at which questions are asked, or what questions are posed. Clearly, asking "right questions" at the "right sites" can be difficult and requires an understanding of the "theoretical and substantive knowledge of the discipline" (Trinkley 1990:30-31).

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;
- identification of the historic context applicable to the site, providing a framework for the evaluative process;
- identification of the important research questions the site *might* be able to address, given the data sets and the context;
- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and
- identification of "important" research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered.

In the case of a survey which identifies multiple sites the process outlined by Townsend et al. (1993) can become burdensome. Consequently, this study has elected to combine some of the steps, making the process more streamlined, without substantively altering the goal to ensure that sites capable of providing significant information are provided the protection afforded in the historic preservation process. The development of a context was not undertaken for each site, but is found outlined in the prehistoric and historic overview section of this report. The identification of "important" research goals is briefly discussed below.

The evaluative process is essentially the same as outlined by Townsend et al. (1993). Data sets and integrity are discussed and although in some cases the lack of data sets is striking, in others they may be overwhelming. Reference is also made to the great deal of landscape modification that has occurred at Taylors Creek. This has destroyed the integrity of most of the individual house site locations within the site boundaries, as well as other data sets (such as subsurface features) that might have once been present. Reference to the prehistoric context is made (when diagnostic material was found) as well as research issues that the site might be able to address.

There is no single overview of Georgia's prehistory, yet the synthesized statement offered here points out at least a few of the major research concerns for the Fort Stewart area. While certainly not exhaustive, these will be used to help determine which sites identified in the survey are

---

properties to evaluate (although it is certainly not the most important). The last criterion, *environmental context*, refers to unusual environmental features or zonation which might be important in distinguishing sites or site types.

important to a better understanding of the local prehistory.

Perhaps first and foremost, **it is not clear where the study tract fits in terms of regional chronology**. Fort Stewart sits on the edge of the coastal zone and that portion of the coastal plain often called the Pine Barrens. It is uncertain if the cultural materials found in the study will clearly be subsumed within the chronology and phase development developed for the mouth of the Savannah River or if it will show influences from the Ocmulgee Big Bend or perhaps even other areas. Will sandy-paste Wilmington-like pottery be found? Will various Ocmulgee-like cord marked pottery be found? Will there be evidence of various Lamar phases? Will Refuge materials be found inland on Fort Stewart?

The amount of data present for Fort Stewart is so limited that the 103,550 ha tract is largely *terra incognito*. This problem has been recognized by Thomas et al. (1995:266) and they, too, emphasize the need for additional survey work. Until much more work is done on the base it will be impossible to clearly understand the role it plays in the prehistory of the Georgia Coastal Plain.

Second, **there seems to be little documented information available concerning the importance of this Pine Barren area of Georgia throughout prehistory**. While it is clearly no longer viewed as a hostile wasteland devoid of culture, there remain legitimate questions concerning the frequency of sites, their function, and their distribution on the landscape. Long-term investigations at Fort Stewart provide a unique opportunity to explore these questions and develop a more comprehensive understanding of site locations and densities.

Third, **there is a need to excavate sites that represent the range of types for each phase of the regional sequence**. Only through excavations will it be possible to explore the complete culture history of the area. Excavations are essential to provide accurate descriptions of assemblages and to assess diachronic changes. Excavations are necessary to collect subsistence data, which will have special bearing on the Mississippian groups found in the region. Excavations are also absolutely essential to the development of platforms from which processual studies can be launched.

While the surveys Chicora Foundation is currently under contract to provide do not involve the kinds of excavations necessary, the survey work can identify sites which exhibit the potential to address this need.

One of the secondary goals we outline was to examine the location of both prehistoric and historic sites in relationship to landforms, soil types, proximity to water, and soil drainage. Our goal in this effort is to further refine, or at least explore, the predictive model currently available for Fort Stewart. Our conclusions explore the importance of landform, soil, and drainage issues to settlement and also present additional data on the expected range of site density for the Fort Stewart area.

We also sought to explore the potential for deeply buried sites in the project area. Since some of the soils exhibit deep A horizons, suggestive of considerable deposition, it seemed important, especially for future studies, to more fully explore this potential. In the **Conclusions** section we offer recommendations concerning cost-effective approaches for site identification in the Fort Stewart area. In particular we caution that it is unrealistic to expect deep shovel testing throughout broad interior survey tracts, when there is at least some evidence that sites will be associated with drainages. A more appropriate approach is to conduct deep tests in areas where sites are most likely to be found, while consistently sampling other areas.

Another goal was to determine the ability of 30 m interval shovel test transects to locate archaeological resources on a given tract. The survey tracts at Fort Stewart, which were found to contain both prehistoric and historic resources, as well as a historic town site, were considered by Chicora as a prime opportunity to study the ability of this archaeological method to determine external site boundaries on widely divergent site types. Both the JAECK Drop Zone survey tract

and the Taylors Creek survey tract contained prehistoric site locations and historic dispersed settlements. Comparative data from the two survey tracts was used to determine the effectiveness of 30 m transects in these areas of the base.

An equally important methodological issue which became important during the course of this work is whether close interval shovel testing is an appropriate strategy for Phase I survey of large historic communities. Our conclusion, while perhaps not meeting with uniform acceptance, is that 30 m shovel tests are adequate for boundary determinations and for initial assessments. At the survey level, we fear that many sites like Taylors Creek cannot be professionally evaluated as more than potentially eligible (and requiring more research) or not eligible (based on heavy disturbance). We seriously doubt that a justifiable eligibility determination can ever be achieved using reasonable expenditure of resources in shovel testing and a single 50 cm test. We also strongly recommend that the United States Army focus on conducting oral history interviews to document details of communities such as Taylors Creek.

Another goal was to determine site function/duration based on artifact content. Sassaman et al. (1990) have suggested that examining the tool to debitage ratio can provide functional information about a site. For instance, a low tool-debitage ratio will reflect either "locations of intensive lithic tool production, or locations were tools or cores were modified but not discarded" (Sassaman et al. 1990:224). A high tool-debitage ratio correspond to "relatively intensively utilized locations (e.g. field stations) away from bases and/or sources of lithic raw material" (Sassaman et al. 1990:224). Artifact density is also a method of examining site function since it reflects the "relative intensity of material discard at a site. By extension, the amount of discard is assumed to be proportional to the cumulative duration of site occupation and/or the total number of site occupants, and/or the intensity of activities from which discarded debris was generated" (Sassaman et al. 1990:223). Diversity of the assemblage can also measure the length of occupation since the discard rate of class one artifacts (such as hafted bifaces, pots, atlatls, etc.) is so low that all classes of artifacts will only be found together at sites with long occupational histories (Sassaman et al. 1990:224). This length of occupation can also be measured by the number of components present (Sassaman et al. 1990).

Density studies have also been helpful in determining site function/duration at historic sites. There has been an extensive amount of work done defining site function/duration during European contact, and the colonial, and post-colonial historic period. Extensive studies, conducted at colonial plantation and settlement sites throughout South Carolina (Lewis 1984, 1985; South 1993; Ferguson and Babson n.d.; Trinkley et al. 1995; Barr 1996) utilize ceramic typologies. European, Native American, and African American earthenwares answer questions related to the function and duration these sites. Quite often, social status and position may be determined as well. Related land use studies may be enhanced by this data.

Archival Research

Given the complete site records available for the Fort Stewart area at the base, these were used in the background research rather than those at either the University of Georgia site files in Athens or Department of Natural Resources files in Atlanta. A total of four previously recorded archaeological sites were found on record at Fort Stewart for the two survey areas assigned. Two were recorded within the JAECK Drop Zone survey boundaries and two were found within the Taylors Creek survey boundaries. No standing structures exist on either of the tracts. The Taylors Creek survey area has had broad support from former residents of the community for a positive recommendation for possible National Register nomination (see the **Prehistoric and Historic Overview** section of this report).

Additional map research, for early topographic sheets of the Taylors Creek area, was conducted at the University of South Carolina Thomas Cooper Library Map Repository. Additional information on the Taylors Creek community was obtained from an oral history informant identified through local contacts in the

Hinesville area.

Field Survey

As is often the case in field investigations, the boundaries of the survey tract were difficult to locate in the field. Even 7.5' USGS topographic maps fail to show all the detail and complexity of land forms. Added to this is the nature of a landscape actively used by the military. Consequently, project area boundaries were driven with the base archaeologist, Mr. David McKivergan. This was particularly important in the Taylors Creek area, where the northeastern boundaries, situated in an area of heavy use and borrow pits, were defined by McKivergan as the pond and southern edge of the emergency spillway.

As specified by the Georgia State Historic Preservation Division, an archaeological *site* is defined as five or more artifacts in a 20 m area or any two consecutive positive shovel tests. An isolated *occurrence* consists of five or less artifacts. All archaeological sites were assigned state site numbers.

Subsurface testing, for the purpose of boundary definitions, was to consist of testing along cardinal directions at 10 m intervals on sites less than 50 m across and 20 m on larger sites. Since surface finds were minimal, all sites were excavated at 10 m intervals or until a total of 2,500 m^2 area was defined. Shovel testing then was modified to 20 m intervals.

Typically, survey tracts are divided into high, medium, and low archaeological probability zones. At Fort Stewart, it is difficult to estimate the number of prehistoric and historic resources on base because so little intensive archaeology has been done. This lack of data mandated that the whole survey area be considered high probability in the work order issued by the National Park Service.

The scope of work specified that high probability surveys include transects and shovel tests spaced at 30 m intervals across the tract except areas of standing water or with 10% or greater slope. All positive shovel tests were further tested utilizing a cruciform on cardinal directions. Shovel testing was continued until two consecutive negative tests were excavated in a row. This would constitute a site boundary. These boundaries were typically defined based on distance and orientation from a positive shovel test station.

Shovel tests, which were typically 30 cm by 30 cm or greater, were to be excavated to subsoil (i.e., the B horizon by USDA definition) or, if subsoil could not be identified to the maximum depth achievable with a shovel (about 75 cm). Minimally, shovel tests were excavated to about 30 cm below surface. In most cases this represented either the extent of remaining A horizon soil or actually penetrated into the C horizon soils. The majority of tests, however, were excavated to depths of 50 to 70 cm. The fill was screened through 0.62 cm mesh hardware cloth and soil stratigraphy was to be recorded on positive shovel tests.

Although the methodology, as outlined in the project scope of work, functioned very well in determining site locations for prehistoric and dispersed historic occupation areas, problems were encountered in the Taylors Creek survey area. Although the general testing was according to the scope of work, as outlined above, two concerns related to the Taylors Creek methodology were discussed with Dr. David Anderson of the National Park Service and Mr. David McKivergan, Fort Stewart Consulting Archaeologist.

The first concern was the Taylors Creek community and its spatial layout. The community of Taylors Creek was initially reported as covering approximately 252,000 m^2. In reality, the Taylors Creek community covered approximately 1,248,300m^2. Whereas the initial assessment of Taylors Creek included only the main part of town, the new assessment included a number of dispersed farm settlements historically included as part of the community. Because of the spatial layout of the Taylors Creek community, all historic sites located within this area were included as one single site designation (9LI311).

The second concern was that of military impacts to the existing physical landscape of what

was the Taylors Creek community. The vast majority of this area has been severely impacted by military operations over the last 55 years. The initial impact was the forced removal of the town's residents, as well as the destruction of any structures associated with the town by the United States Army in 1941. Other modifications to the landscape have been the use of heavy equipment in the excavation of borrow pits southwest and southeast of the intersection of Fort Stewart Roads 40 and FS144, the construction of Fort Stewart Pond 4 and associated spillway north of the town limits, numerous drainage ditches and firebreak lines throughout, the movement of earth to construct defensive positions for tanks in the area southwest of the intersection of Fort Stewart Roads 40 and FS144, the widening and construction of roads and their associated drainage systems through the Taylors Creek area (which affected some areas as far as 100 m off the road), the impact of short rounds from military training, and the general movement of earth and any cultural artifacts throughout the area.

Topographically the effects of these modifications are very evident within the central core area of the Taylors Creek community. Stratigraphic profiles and the presence of historic artifacts at depths ranging from 30 to 70 cm in depth confirm this disturbance. The extent of disturbance at the site negated the need for close interval testing within a majority of the townsite boundaries. Although Dr. Anderson and Mr. McKivergan were in agreement with this assessment of disturbance to the landscape and agreed that the scope of work could be modified when these disturbances were encountered, a number of internal loci were close interval tested. This was done to ascertain a general idea as to how much of the community was severely impacted by military operations.

Survey transects were plotted and numbered on a project field map (Figures 20 and 21) and transect logs were kept indicating if a shovel test was excavated. In the JAECK Drop Zone survey area a total of 421 transects were traversed and a total of 5476 shovel test units were to be excavated. In the Taylors Creek survey area a total of 179 transects were traversed and a total of 2601 shovel test units were to be excavated. Of the 8077 shovel test units anticipated, 4810 (or 59.6%) consisted of shovel tests and the remaining 3267 were determined to be in lowland areas, bogs, drained or standing marshland, or borrow pits, and consequently were either not excavated or were not screened (the soil only being turned over to verify its wet condition or soil profile).

One 50 cm by 50 cm test was to be excavated at each *site* to subsoil or a minimum of 100 cm (assuming subsoil was not reached). Profiles were to be drawn to scale and soil was to be described using a Munsell Soil Color Chart designation. Photographs were taken using black and white and color transparency film.

At each *site*, a sketch map was drawn to scale showing the locations of shovel tests, test units, natural and man-made features, and datums.

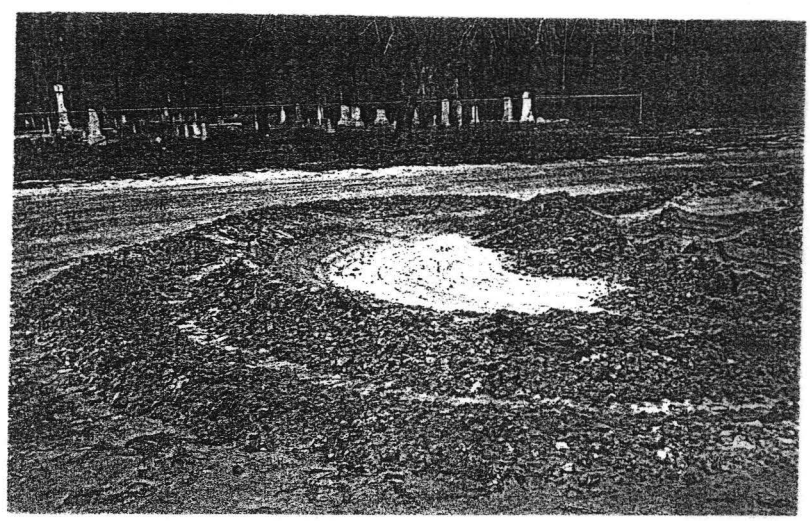


Figure 19. Disturbance created in the center of Taylors Creek (9LI311) by tanks. These turn-arounds are minimally 30 cm in depth. View is to the north.

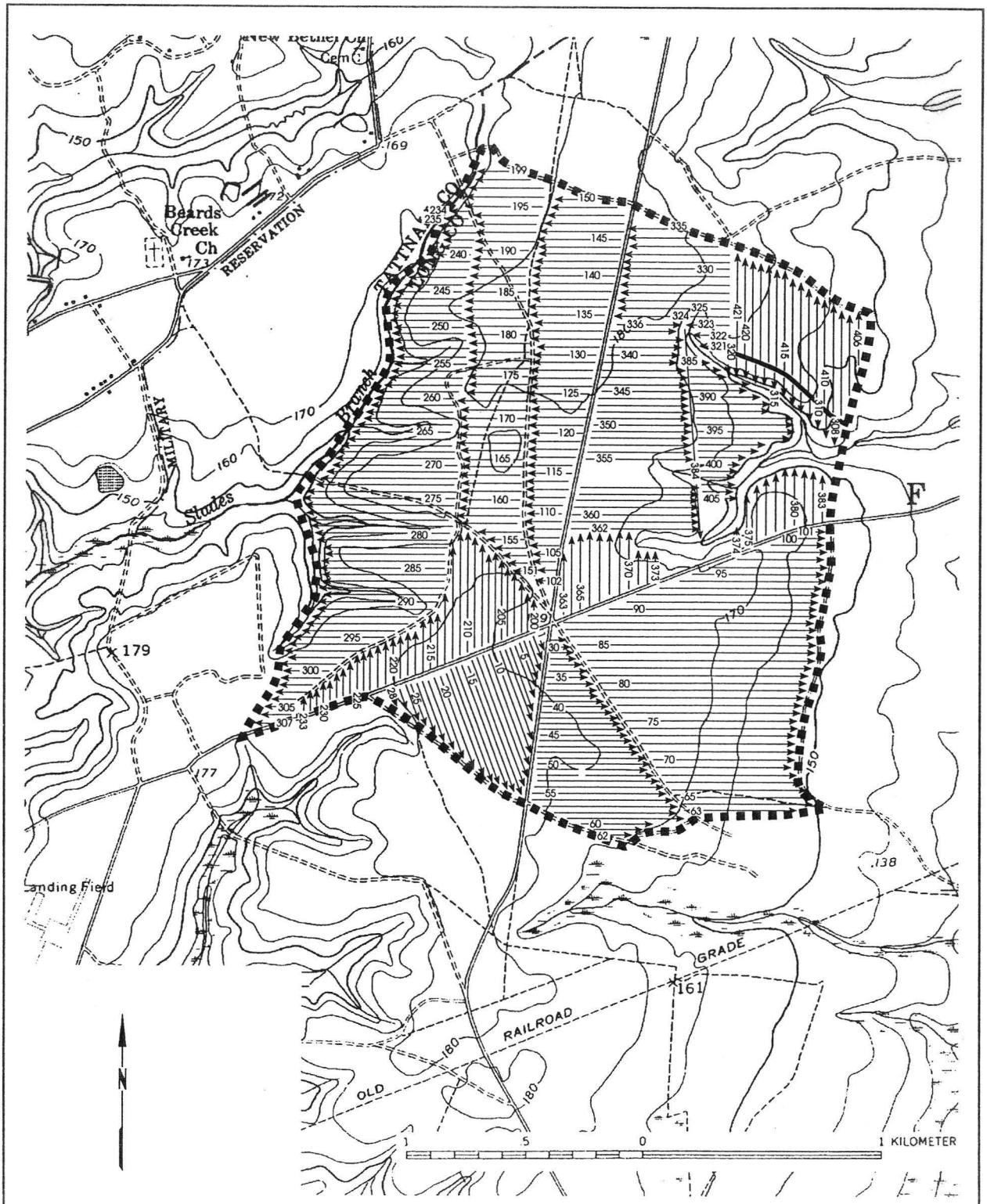


Figure 20. Location of survey transects in the JAECK Drop Zone survey tract.

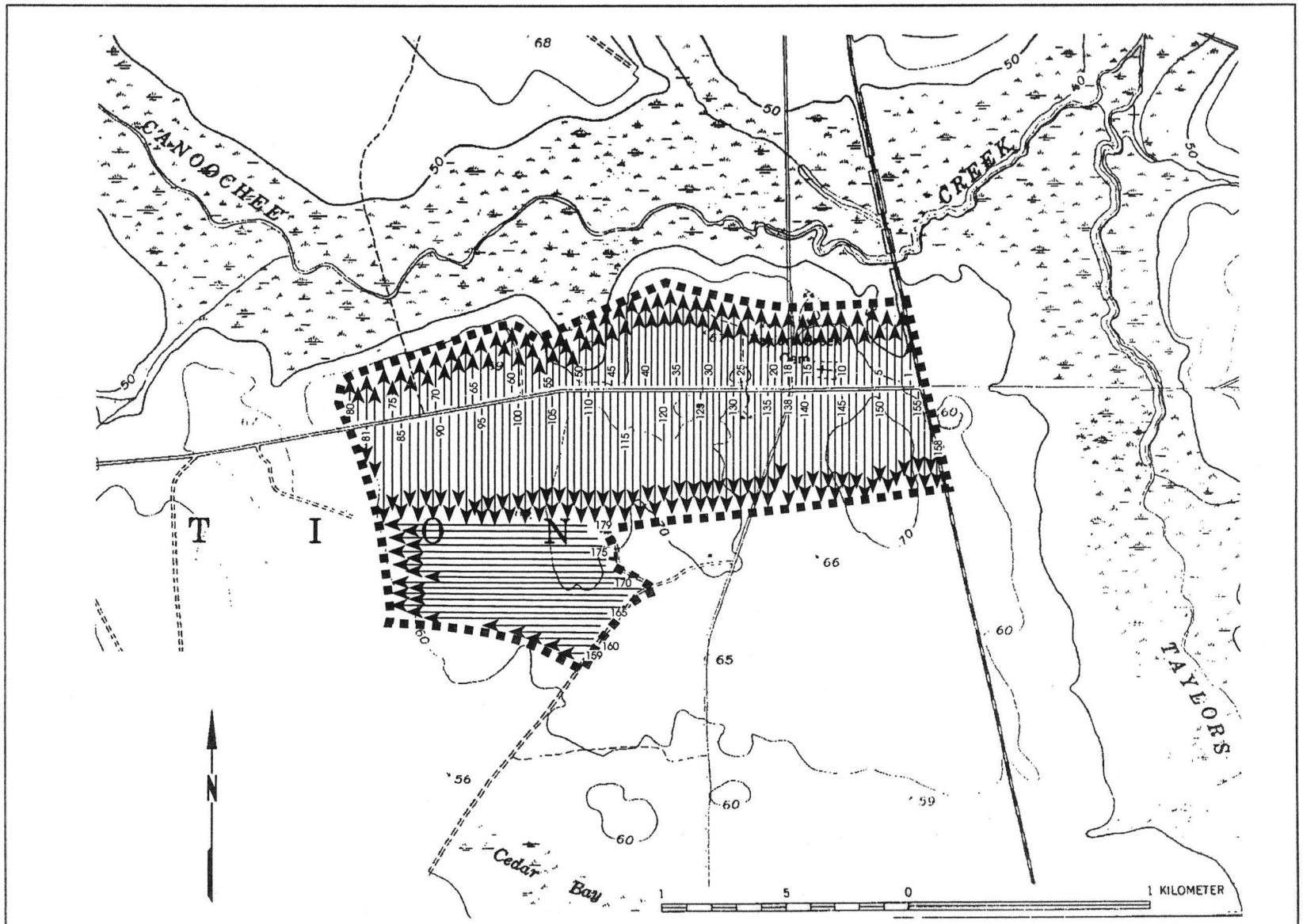


Figure 21. Location of survey transects on the Taylors Creek survey tract.

Table 2.
UTM Coordinates for Sites in the JAECK Drop Zone and Taylors Creek Survey Tracts Using GPS with Selective Availability

	Positions	GPS			Map Interpolation	
Site #	Recorded	N	E	Elevation*	N	E
9LG44	169	3536870	418925	+27 m	3536680	418950
9LG45	128	3536810	419013	+25 m	3536650	419020
9LG46	123	3538770	420369	- 15 m	3538570	420260
9LG47	526	3537738	420747	+57 m	3537500	420710
9LI311	128	3533295	439007	+ 9 m	3533100	438890
9LI357	266	3522561	437127	-38 m	3533420	437400
9LI358	128	3533480	436961	+15 m	3533310	437090
9LI359	149	3533438	436791	+23 m	3533260	436920

* GPS determined altitude by height above the WGS-84 ellipsoid (HAE), not with respect to the mean sea level. The difference between the two can be great and conversion algorithms can have errors of greater than 5 m. Consequently, these figures are ignored.

In addition, GPS positions were to be taken at all *sites*, and at each potentially eligible or eligible *site* a ferrous metal datum (45 to 55 cm in length) was to be established.

The GPS positions were taken with a Trimble GeoExplorer™ rover with *at least* one position recorded. Where possible, additional positions were taken since averaging provides some improvement on accuracy. These readings, as they stand, were all affected by what is called selective availability (S/A). This is the deliberate introduction of errors into the GPS measurements by the Department of Defense. This degradation results in horizonal errors of up to 100 m 95% of the time and vertical errors of up to 173 m 95% of the time.

There are other factors also affecting the accuracy of an uncorrected GPS reading and potentially make the range of error much greater than ±100 m. These include ionospheric and atmospheric delays which can affect the speed at which a signal is received on a given time of the day. While this speed can be predicted for an average day, changes in atmospheric conditions, which are out of the ordinary, can not be corrected. Other factors involving accuracy are the distance of a satellite above the horizon, the distance between satellites, the availability of the necessary number of satellites, and "multipath error." Multipath error means that the signal does not go directly to the receiver, but bounces off other objects before reaching the receiver.

GPS readings taken with S/A active can be corrected by comparing them to data collected simultaneously at a known location or base station. Called differential correction (or DGPS), this was undertaken with the Fort Stewart data as postprocessing (Table 2). With correction, the accuracy may be ±5 m.

UTMs were also hand plotted and these positions are provided in Table 2. Comparing the DGPS and interpolated map coordinates reveals differences ranging from 160 m to 310 m (with a mean difference of 224 m and a standard deviation of 43 m). While there are certainly problems recording positions in the woods, as any archaeologist will affirm, the interpolated positions have high levels of confidence since they are based on topographic features, distances and bearings to landmarks, and placement within fairly well identified transects.

When compared, the DGPS locations are frequently on the wrong side of roads, or otherwise so misplaced that there can be no doubt that there are significant errors in these data. In all cases the hand plotted UTMs are considerably more accurate than the DGPS coordinates.

Even differential correction of GPS data may involve significant errors. For example, for every 10 km distance between the rover and base stations, there is a probable horizontal error of 1 m. Another problem encountered at Fort Stewart was that the elevation of the roving Trimbell Explorer™ was the same as that of the base station, further degrading some readings. Further possible problems may include the number of satellites in view, the position of these satellites relative to each other, the strengths of their signals, and even the data processing methods. As Trimble Navigation observes, accuracy *can* range to over 300 meters.

The critical parameters used by the

Chicora rover attempted to maximize both data quality and quantity, using the Trimble recommended default settings (for example, the PDOP mask, which is a indication of the accuracy of the GPS positions which are calculated, is set at 6, with PDOPs below 4 being excellent and above 8 being poor). The only changes we can immediately identify which might improve the quality of the DGPS data would be to schedule data collection times and satellites being used based on their almanac files in order to maximize precision. This, however, is a time consuming technique and also requires that field survey be scheduled around GPS data acquisition, which is not cost-effective. Consequently, we recommend that reliance continue to be placed on map interpolation as the primary site location technique. The National Park Service should consider funding additional research, and perhaps training classes, in GPS if this technique is to become a viable alternative.

Datums at potentially eligible sites consisted of a length of iron rebar with approximately 5 cm exposed above ground. An aluminum cap marked with the temporary site number was placed on top of the rebar. Permanent site numbers could not be used as they had not yet been assigned.

No deviations from the original methodology described in the Scope of Work (other than those discussed above) occurred during the field work. No other unusual or expected problems occurred during the study which affects the quality of the data.

Laboratory Methods

The cleaning of artifacts and cataloging of the specimens was conducted during rain days in the field and completed at Chicora laboratories in Columbia in early March 1996. The materials will be curated at Fort Stewart and have been cataloged using that institution's accessioning practices which are an adaptation of those used by the Georgia Office of State Archaeology. No specimens were identified which required conservation or stabilization. Specimens were packed in plastic bags and boxed. Field notes were prepared on pH neutral, alkaline buffered paper and photographic materials were processed to archival standards. All field notes, with archival copies, will also be curated with this facility.

Analysis methods focussed on occupation spans, likely functions of the various sites, and changes in raw material or ceramic preferences. With prehistoric sites, diagnostic lithics and/or ceramics provide temporal information. The ceramics were compared to published type descriptions where available (such as DePratter 1991) or relied on general descriptions (such as Snow 1977).

Diagnostic projectile points were likewise compared to published type descriptions (such as Coe 1964 or Bullen 1975). Georgia has, however, borrowed heavily from neighboring states. Often the type descriptions are poor and frequently the materials are poorly recognized or duplicate types in other states. We have tried, where ever possible, to simplify rather than make more complex, the identification of points.

The temporal, cultural, and typological classifications of the historic remains follow Noel Hume (1970), Miller (1980, 1991), Price (1970), and South (1977).

RESULTS OF SURVEY

Introduction

The cultural resources identified during the intensive survey of the 522 ha JAECK Drop Zone at Fort Stewart consist of five archaeological sites and 12 isolated occurrences. Two (9LG26, 9LG31/9LG46) were previously identified by Fort Stewart Base archaeologist David McKivergan, and four (9LG44, 9LG45, and 9LG47) were discovered during Chicora's 1995-1996 survey (Table 3, Figure 22). The 12 isolated occurrences were assigned the numbers 9LG50 - 9LG61. None of the sites are recommended eligible for inclusion on the National Register of Historic Places, although one site (9LG47), found outside the survey boundaries, is recommended as potentially eligible and worthy of protection until such time as it can be further assessed.

The cultural resources identified during the intensive survey of the 241 ha Taylors Creek area consist of six archaeological sites, three of which (9LI307, 9LI311, and 9LI362) had been previously recorded by either Base Archaeologist Thomas J. Pluckhahn or Consulting Archaeologist David McKivergan. Three other sites (9LI357, 9LI358, and 9LI359) were discovered during Chicora's 1995-1996 survey (Figure 23, Table 3). None of these sites are recommended eligible for inclusion on the National Register. Two sites are recommended potentially eligible. One, 9LI357, requires more intensive testing to identify the potential for subsurface features. Another, 9LI362 (previously identified as 9LI(FS)57) is recommended potentially eligible until such time as a possibly associated knoll outside the survey boundary is examined.

JAECK Drop Zone

Previously Recorded Sites

9LG26

Site 9LG26 is reported to be located 600 m west of Fort Stewart Road 5 and approximately 1,200 m north of Fort Stewart Road 4 (Figure 22). The central UTM coordinates are N3538040 E419020. The site is situated on a terrace east of the Slades Branch drainage and is located in a cultivated wildlife food plot. The soils in this area are classified as Blanton sands. The site elevation was recorded as 55 m above mean sea level (AMSL).

The site was originally identified by Fort Stewart Base archaeologist David McKivergan in

Table 3.
Archaeological Sites in the JAECK Drop Zone and Taylors Creek Survey Area

Site #	Components	Size	Quad Map	Eligibility
JAECK Drop Zone				
9LG26	lithic	not known	Glenville	not relocated/NE
9LG31/46	historic	1,244 m²	Glenville	NE
9LG44	Refuge/Deptford	2,325 m²	Glenville	NE
9LG45	Savannah	4,122 m²	Glenville	NE
9LG47	historic	5,300 m²	Glenville	PE
Taylors Creek				
9LI307	Deptford/Savannah	est. 800 m²	Taylors Creek	not relocated/NE
9LI311	historic	815,625 m²	Taylors Creek	NE
9LI357	Middle Woodland	10,200 m²	Taylors Creek	PE
9LI358	Mississippian	1,611 m²	Taylors Creek	NE
9LI359	lithic	1,378 m²	Taylors Creek	NE
9LI362	Swift Creek-Irene	est. 1,200 m²	Taylors Creek	not relocated/NA

NE = not eligible PE = potentially eligible NA = not assessed

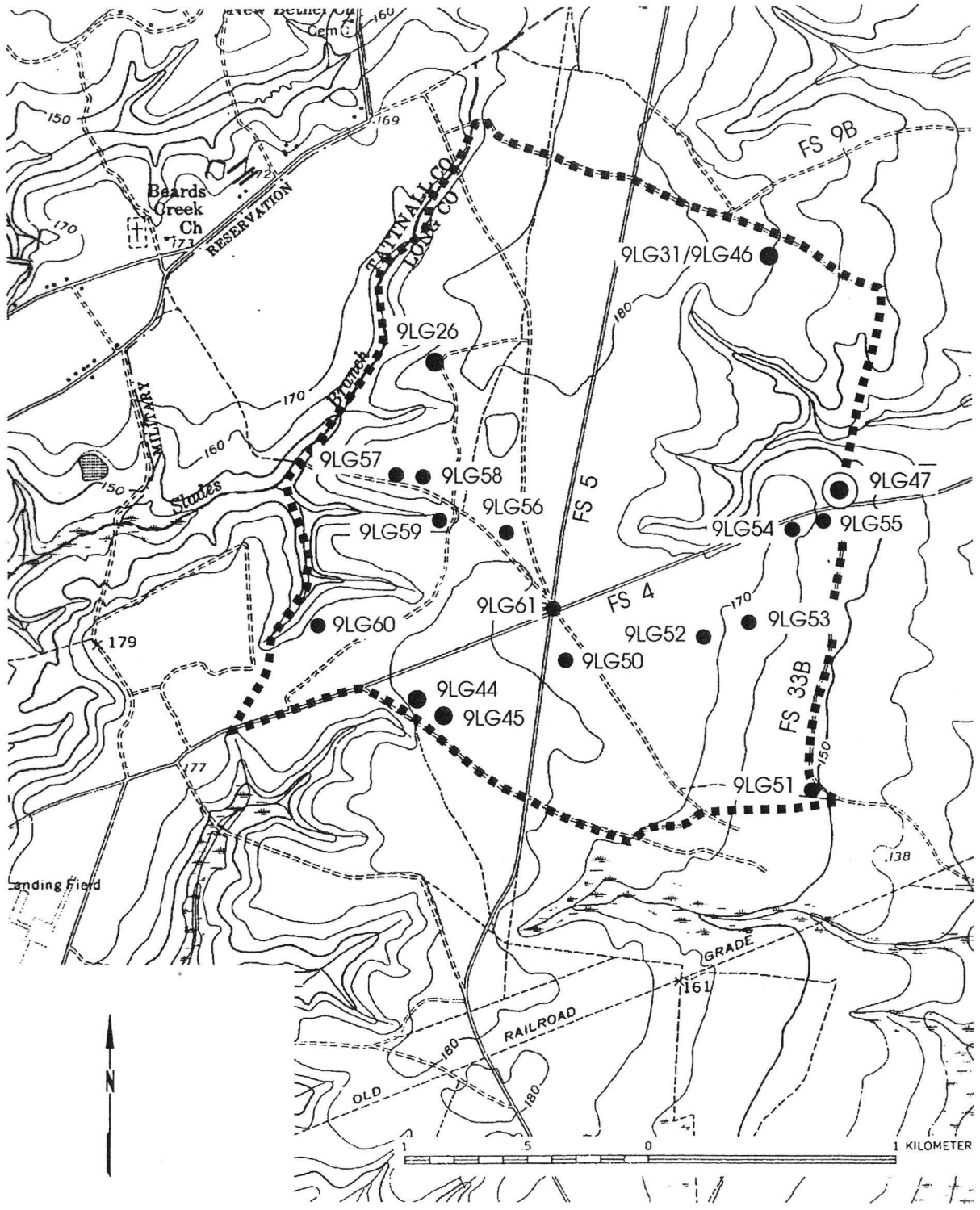


Figure 22. Archaeological sites reported from and located on the JAECK Drop Zone.

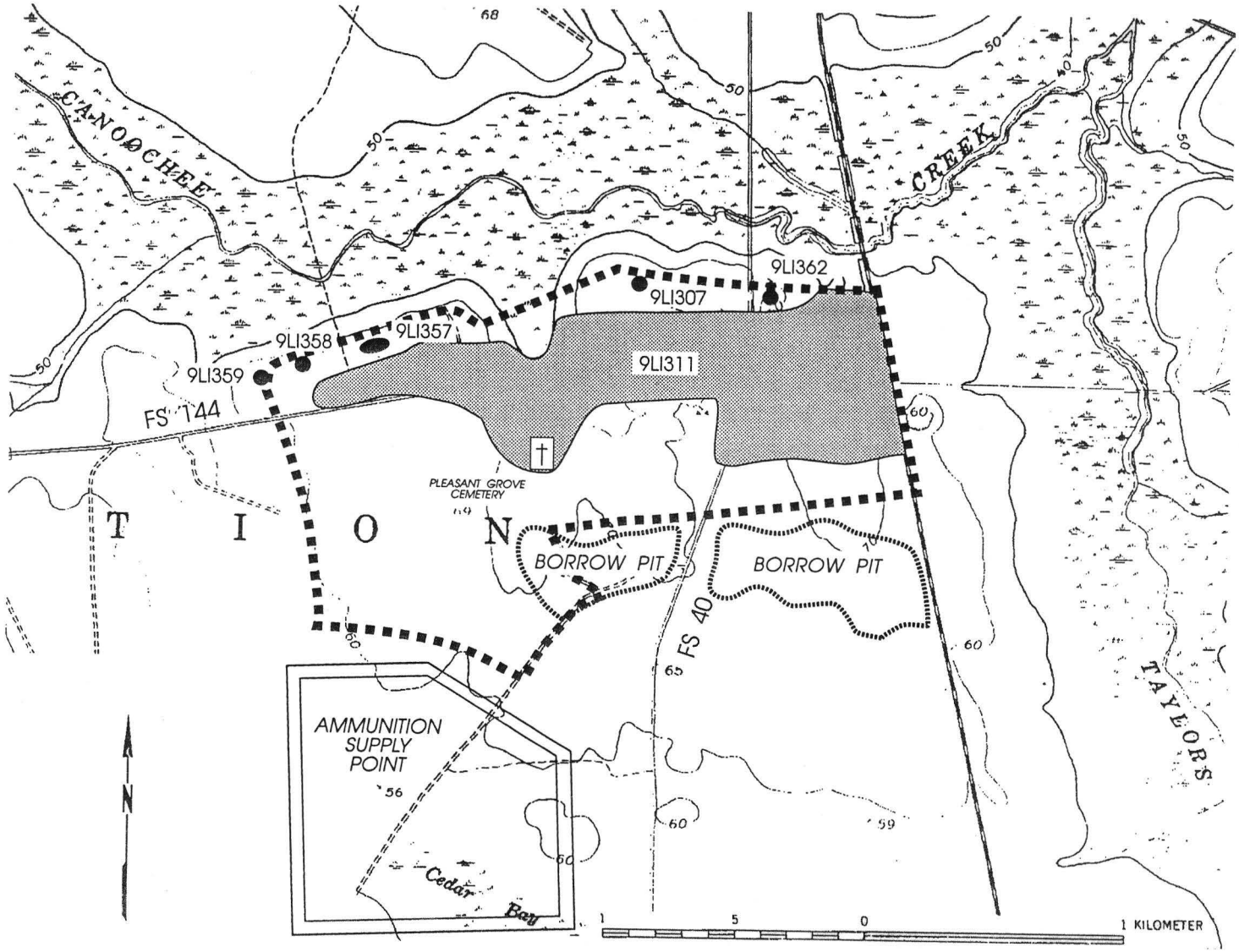


Figure 23. Archaeological sites reported from and located on the Taylors Creek survey tract.

December 1994. An unrecorded number of CoastalPlain chert flakes and one fragment from a biface were collected from this location. No subsurface testing was performed and the eligibility of this site was listed as "unknown," implying that additional work was necessary.

During our survey no artifacts were identified either from the 30 m transect survey or from the surface. A clay anomaly, subsequently identified as a natural clay dome, was found in Shovel Test (ST) 2 on Transect (T) 259.

Given the very sparse collection of artifacts during the initial survey and this study's inability to relocate any evidence of the site, it seems likely the site was entirely collected during its initial recordation. Consequently, we recommend the site as not eligible for inclusion on the National Register. No additional study or recordation appears necessary.

9LG31/9LG46

Site 9LG31/9LG46, originally identified by Fort Stewart Consulting Archaeologist David McKivergan in December 1994, is located approximately 210 m south of Fort Stewart Road 9B and approximately 120 m west of Fort Stewart Road 5 (Figures 22 and 24). The central UTM coordinates are N3538770 and E420369. This site is situated on a terrace between drainages located both north and south of the site. Site elevation is 54 m above sea level.

Immediately adjacent to the site is sparse grassland with hardwoods, planted pines, and scrub. A small pecan grove and grass cover the site itself. The site was estimated, based on the surface scatter, to cover about 120 m north-south and 120 m east-west. During the initial assessment, McKivergan collected an unspecified quality of "ironstone" ceramics (whiteware), brick, amethyst glass, and grey stoneware. No subsurface testing was performed, but the site was recommended as not eligible for inclusion on the National Register of Historic Places.

During our field investigations we were unable to reconcile the 9LG31 site map and the actual physical location of the site we found in the general area through shovel testing on Transect 418 and from surface collections (Figure 24). We therefore thought that the two might be different sites and proceeded to record our find as a new site. It was only much later in the production of this report, as we continued to compare sketch maps and the USGS locations, that we realized there were also strong similarities between the two locations and the materials collected, in spite of continued differences in the map locations,. We finally concluded that the two recorded locations were one site. Although it is possible to eliminate 9LG46, this would create considerable curatorial problems so we have chosen to retain both site numbers.

A number of surface artifacts were recovered from within the site parameters. A total of 28 shovel tests were excavated to a depth of at least 75 cm, eight of which were positive. A total of nine artifacts were recovered from these positive tests. All reflect an occupation from the early to mid-twentieth century.

A 50 cm test unit was also excavated at the site to a depth of 45 cm below surface. The soil profile consists of 30 cm of yellowish brown (10YR6.5/5) sand overlying 15 cm of very pale brown (10YR7/3) sand (Figure 24). The soils at this site are classified as Blanton sands.

A total of 82 artifacts were collected from the site — seven from shovel tests, 13 from the test unit, and 62 from the surface, which provided excellent visibility. All of these, except for the collection of one chert flake from the surface, were historic materials (Table 4).

The artifacts recovered from site 9LI31 suggest an occupation which may span the turn of the century and into the early twentieth century. The single tightly dated artifact is a Coca-Cola® bottle fragment, which is typical of the period from 1918 through 1923. The site possibly functioned as a farmstead and may have been occupied by tenant labor. Whiteware, stoneware, canning jars, and other household goods recovered during the investigations are frequently associated with tenant sites throughout Georgia and the Carolinas and no

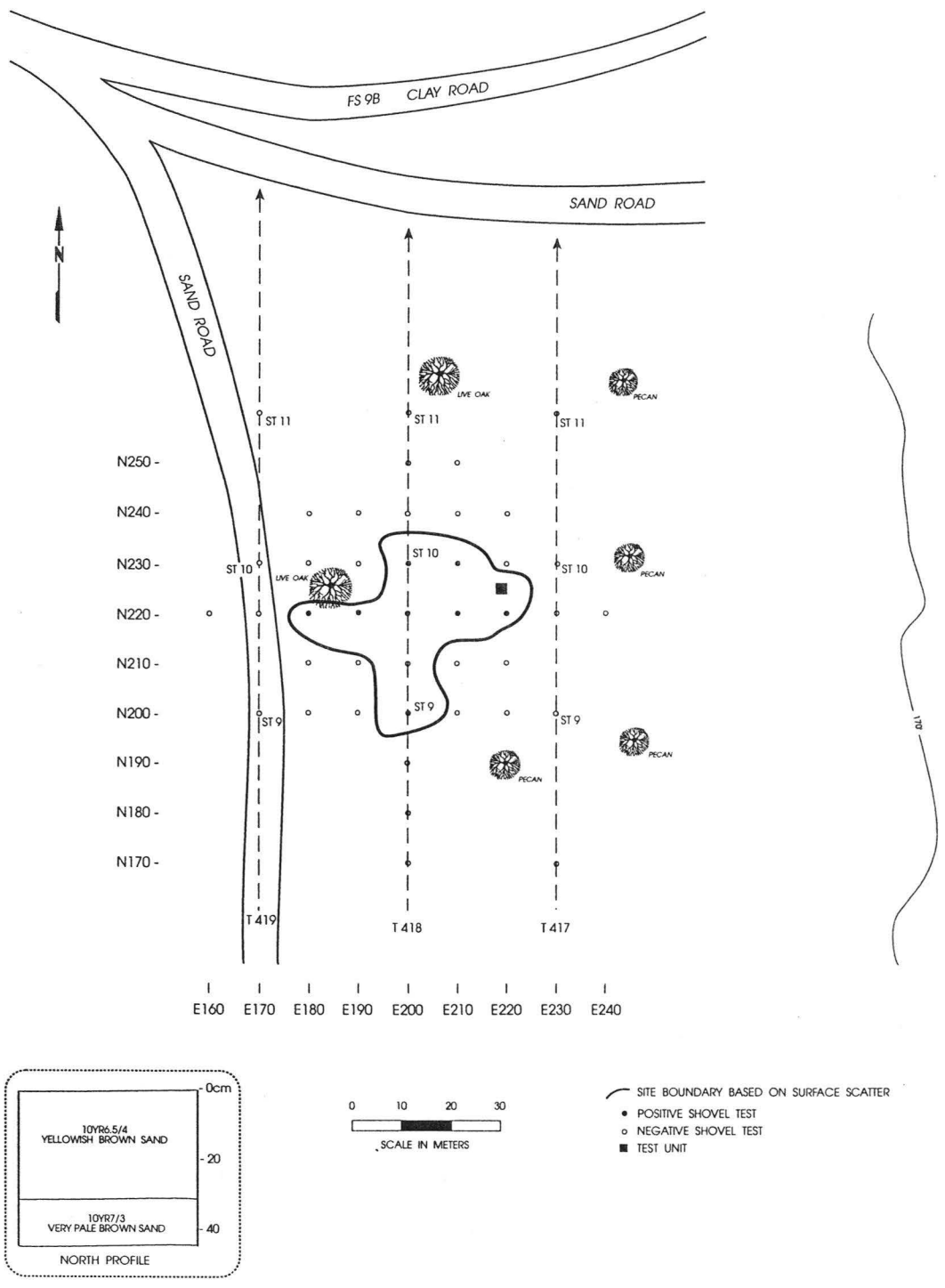


Figure 24. Map of 9LG31/9LG46 and test unit profile.

Table 4.
Artifacts Recovered from 9LG31/9LG46

	T 418 ST9	N200 E180	N200 E190	N200 E200	N200 E210	N210 E200	N210 E210	TU 1	West of Road	East of Road
Whiteware, undec	1				1	1			6	11
Bristol slip stoneware									1	2
Bristol/Albany slip stoneware										1
Brn SGSW								5		
Alkaline glazed SW								1		
Coarse red EW								1		
aqua glass		1		1					2	2
brown glass								2	1	1
manganese glass			1	1				1	2	2
clear glass					1			2	2	9
milk glass								1		1
UID nail frag							1	P		
window glass									1	
architectural hardware										1
brick fragments									P	P
turpentine pot frags									2	9
strap iron									P	P
industrial pipe										1
UID metal frags								P		
shell fragments									2	2
chert flake									1	

P = present, but not collected.

high status artifacts were found. A number of turpentine collection pot fragments may indicate one aspect of the farm's overall production.

Such sites have the potential to yield very important information for the Fort Stewart area. Thomas et al. (1995:203) mention that while evidence of timber/naval stores production sites should be found in the archaeological record, these sites have thus far been missed by archaeological investigations. Likewise, there appears to be a very limited data base for late nineteenth and early twentieth century agricultural units (Thomas et al. 1995:192).

Clearly such sites as 9LG31/9LG46 are important to our understanding of the Coastal Plain of Georgia. Unfortunately, this site does not appear to possess the data sets integrity necessary to address the research questions which might be proposed.

Although there is little surface evidence of military impact at this time, soil profiles do indicate soil disturbance to 30 or 40 cm below surface. At least some of this may be agricultural, perhaps even associated with the orchard present on the site. Other disturbance may be related to the military's use of the area, especially use by tracked vehicles.

Compounding the problem, the use of foundation stones or brick for support of many turn of the century structures (most clearly evidenced at the Taylors Creek community) would likely decrease the chances of any sub-surface features being present. No privy or well depressions were located during this survey.

Therefore, it is very unlikely that this site can address significant research questions and is consequently recommended as not eligible for inclusion on the National Register of Historic Places.

Newly Recorded Sites

9LG44

Site 9LG44 is a prehistoric site located approximately 60 m south of Fort Stewart Road 4 and 300 m west of Fort Stewart Road 5 (Figures 22 and 25). The central UTM coordinates are N3536870 and E418925. The site is situated on a terrace overlooking the northwestern edge of an intermittent drainage. The elevation of the site is 53 m above sea level.

Although vegetation at the site is sparse grassland with planted pines and scrub, allowing 75 to 80% visibility, only two artifacts were recovered from the surface — a Coastal Plain chert used flake and a Coastal Plain flake. The majority of artifacts recovered came from a series of positive shovel tests which ran 240 m north-south and 30 m east-west. Seven positive shovel tests out of 30 excavated were encountered during testing. All were excavated beyond the A horizon to 75 cm. Artifacts recovered from shovel testing included seven Coastal Plain chert flakes and one sherd. In each case these materials were recovered from the upper 30 cm of the site.

A 50 cm test unit was also excavated at the site to 100 cm below surface. No artifacts were recovered. The soil profile of the test unit consists of 32 cm of very dark gray (7.5YR3/0) sand overlying 10 cm of yellowish brown (10YR5/4) sand on top of a very pale brown (10YR7/3) sand (Figure 25). The soils at this site are classified as Blanton sands.

A total of 10 artifacts were collected from the site, including eight Coastal Plain chert flakes, one used flake, and one Refuge/Deptford Plain sherd (which suggests an Early to Middle Woodland occupation). This very sparse assemblage suggests that the site functioned as a limited activity site.

The site appears to be in fairly good condition, with only slight erosion evidenced from near the road cut to the south. In addition, there is very little current indication of military impact, although the possibility of undetected previous damage from heavy track vehicles and foxholes is present.

In spite of its apparent condition, the paucity of remains at this site, both surface and sub-surface, coupled with the lack of either materials or features identified in the test unit, suggests that the site contains a very low density of cultural materials. It is unlikely that the site can address significant research questions. Site 9LG44 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG45

Site 9LG45 is a prehistoric site located approximately 60 m south of Fort Stewart Road 4 and 240 m west of Fort Stewart Road 5 (Figures 22 and 26). The central UTM coordinates are N35368110 and E419013. The site is situated on a terrace overlooking the northwestern edge of an intermittent drainage 60 m west of site 9LG44. Elevation at the site is 55 m above sea level.

Vegetation at the site is sparse grassland with planted pines and scrub, which provided 75% to 80% ground visibility. Three prehistoric sherds and two Coastal Plain chert flakes were collected from the surface. All were associated with a sand road to the south and either fell within the road bed itself or along the northern shoulder. Only one shovel test (ST 7) on T 23 was positive, producing a small chert flake. Initial cruciform testing around this one positive shovel test produced no additional artifacts.

A 50 cm test unit was also excavated at the site to 100 cm below surface. No artifacts were recovered. The soil profile consists of 15 cm of light brownish gray (10YR6/2) sand overlying 85 cm of very pale brown (10YR7/4) sand (Figure 26). The soils at this site are classified as Blanton sands.

Site boundaries were based on the one positive shovel test at the northern extreme end of the site and the series of five artifact finds in or at the edge of the dirt road at the south end of the site. In order to shovel test to the extreme southern end of the site, the cruciform testing was

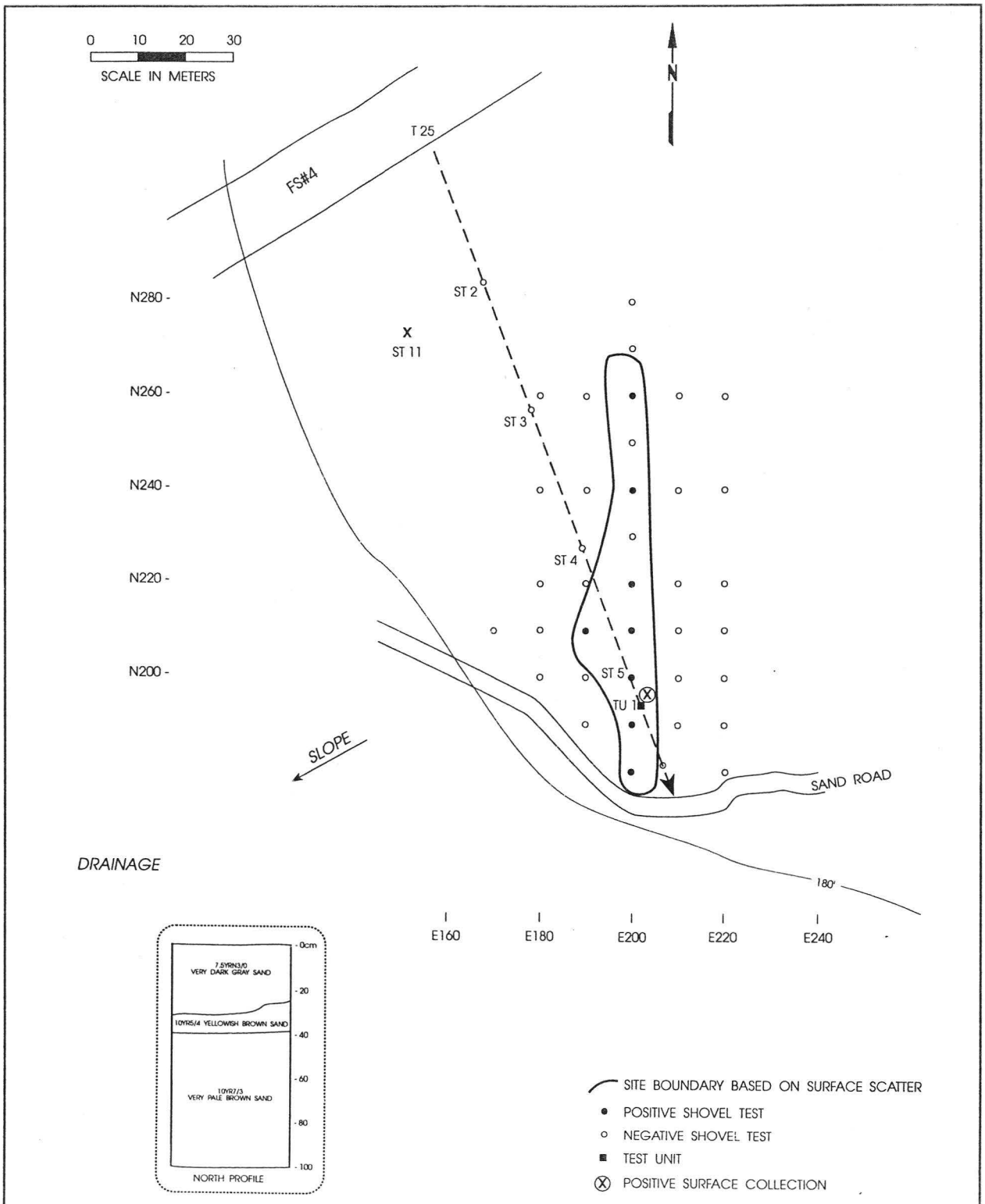


Figure 25. Map of 9LG44 and test unit profile.

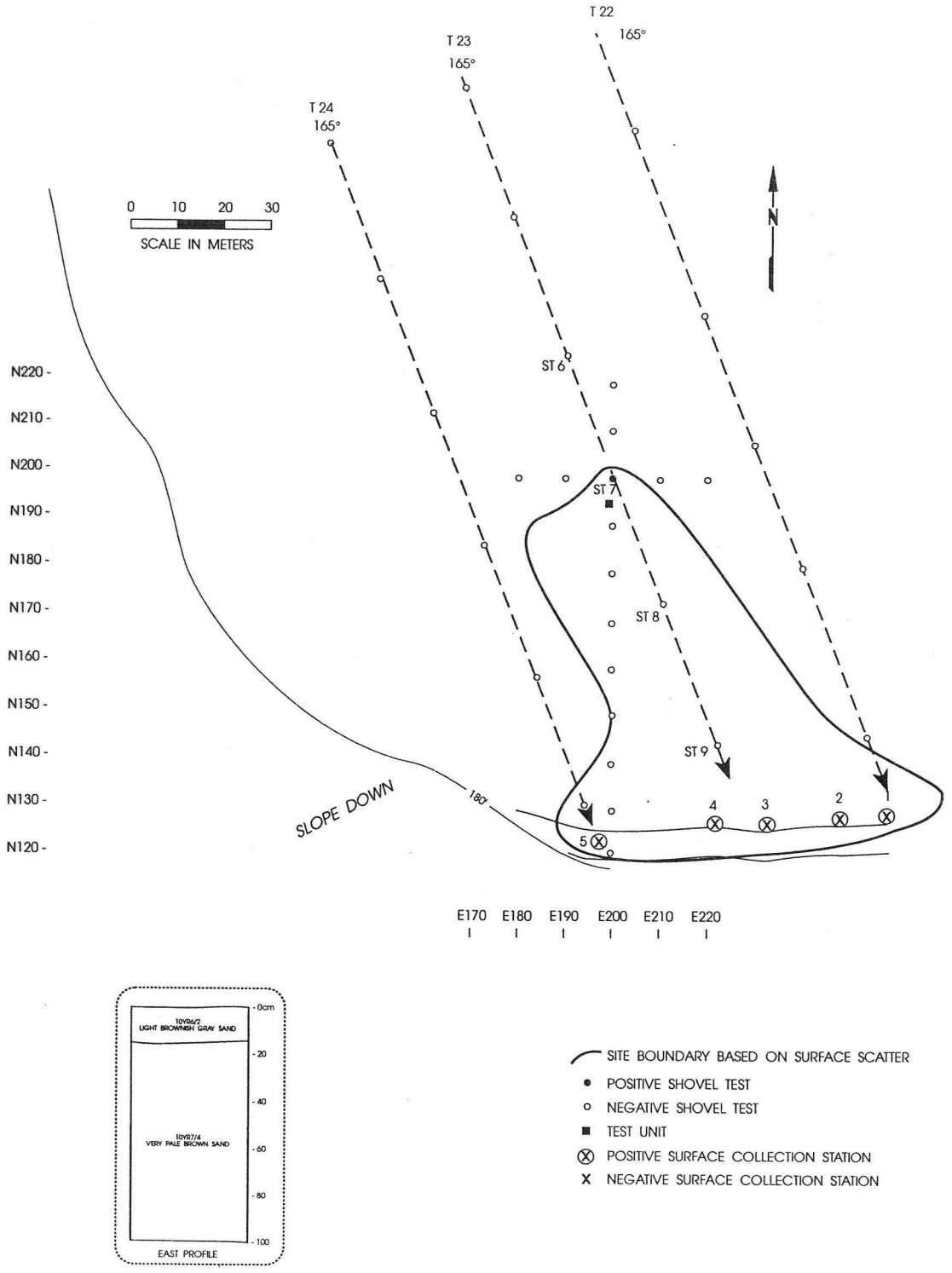


Figure 26. Map of 9LG45 and test unit profile.

extended northward along the E200 line to N240. All of these tests were also negative. These, coupled with the negative shovel tests from T 22, T 23, and T 24 provided coverage of the site, helping to ensure that no "pockets" of subsurface materials exist within these boundaries.

Much like site 9LG44, the artifacts recovered from site 9LG45 — two small unidentifiable pottery sherds, a Savannah Check Stamped sherd, and three flakes — suggest a limited activity site, probably used during the Early Mississippian Period.

The site is in fairly good condition, with only slight erosion being evidenced from near the road cut to the south. There is very little evidence of military impact at this time, but the possibility of earlier damage from heavy track vehicles and foxholes cannot be ruled out. Regardless, the paucity of remains at this site, both surface and subsurface, suggest that no features are present. Therefore, it is very unlikely that it can address significant research questions. Site 9LG44 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG47

Site 9LG47 is a historic site located on the northeast corner of the intersection of Fort Stewart Road FS 33B and Fort Stewart Road 4 (Figures 22 and 27). The central UTM coordinates are N3537738 E4207477. The site is situated on a terrace between drainages located both north and south. The elevation at the site is 48 m above sea level. Vegetation in the area is low brush with hardwoods, planted pines off site, and an oak grove and grass at the site's location.

Site 9LG47 fell outside of the survey boundaries. In accordance with the scope of work, a representative sample of artifacts were collected from the surface, but no shovel tests or test unit were excavated. A total of 10 artifacts were recovered — one blue edged pearlware, two undecorated whiteware, one decalcomania whiteware, one gray salt glazed stoneware, three fragments of clear glass (one representing a molded dish and another a bottle), one light green molded glass, and one fragment of manganese glass.

A soil profile was derived from the nearest shovel test to the site. This was ST1 on T 383. This profile consists of 20 cm of very pale brown to light yellowish brown (10YR6.5/4) sand overlying 20 cm of very dark grayish brown (10YR3/2) sand over a very pale brown (10YR7/3) sand to a depth of 60 cm (Figure 27). The soils at this site are classified as Fuquay sandy loam.

Similar to site 9LG46, the artifacts recovered from site 9LG47 suggest an occupation which may extend from the early nineteenth century (pearlware) through the second quarter of the twentieth century (decalcomania). The site probably functioned as a farmstead.

Situated outside the study tract and not subjected to more intensive shovel testing, we recommend this site as potentially eligible for inclusion on the National Register to ensure its protection until such time as it can be further evaluated.

Isolated Occurrences

Isolated occurrences, which consisted of five or fewer artifacts in a 20 m diameter, were found as either surface finds or through shovel testing. In all but one case the initial finding was treated as a site with a minimum of two additional shovel tests excavated off the positive test in cardinal directions. In the case of these isolated occurrences there was an initial positive shovel test and a minimum of eight negative shovel tests. The one exception to this practice was a surface find at the edge of north-south and east-west sand roads. In this case the roads themselves offered exceptional surface visibility and no shovel tests (other than those associated with the 30 m transects) were dug.

Detailed individual sites maps are not provided, since in every case such maps would be of no assistance in relocating the site, establishing its boundaries, or understanding the setting. We have provided small scale sketch maps (Figures 28

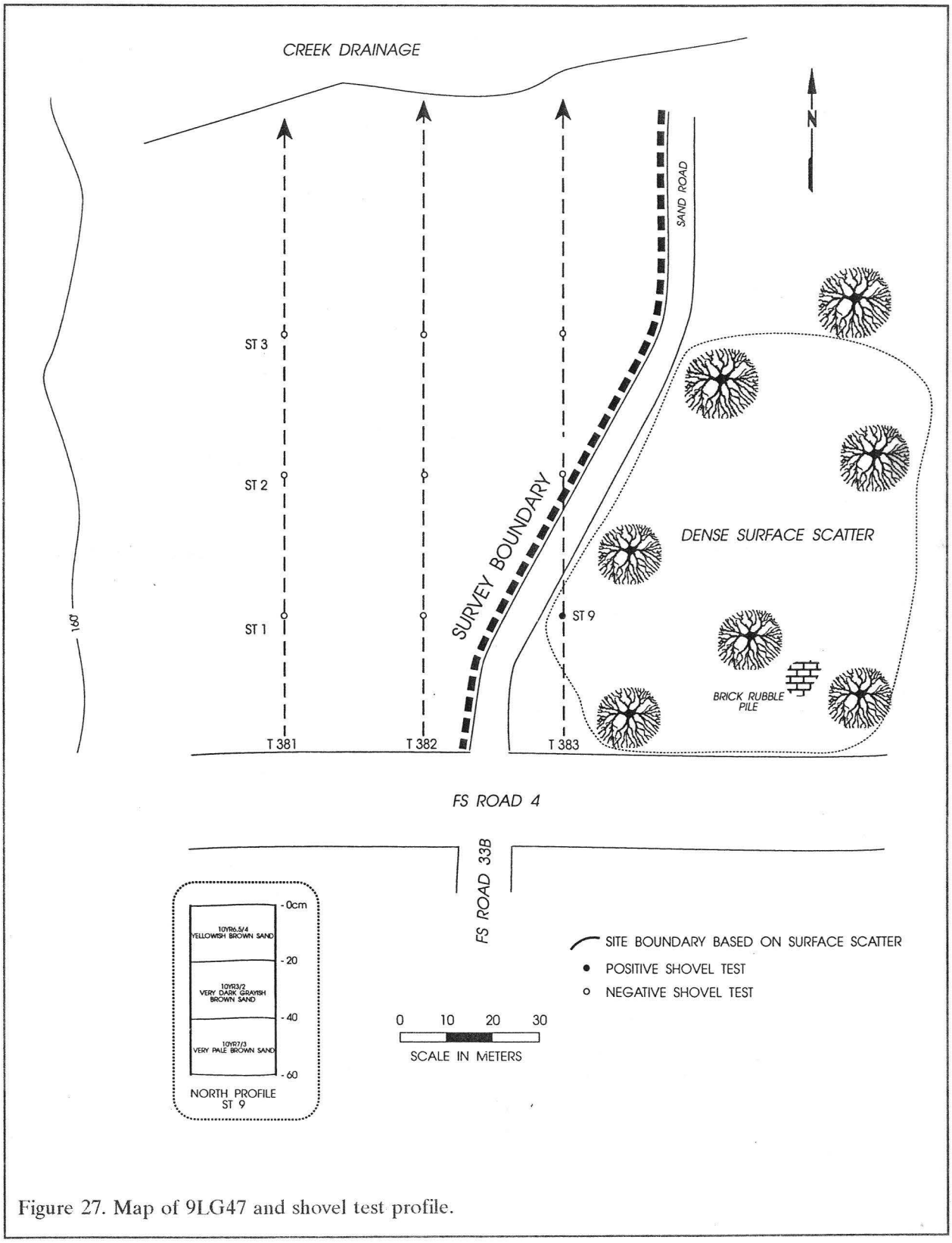


Figure 27. Map of 9LG47 and shovel test profile.

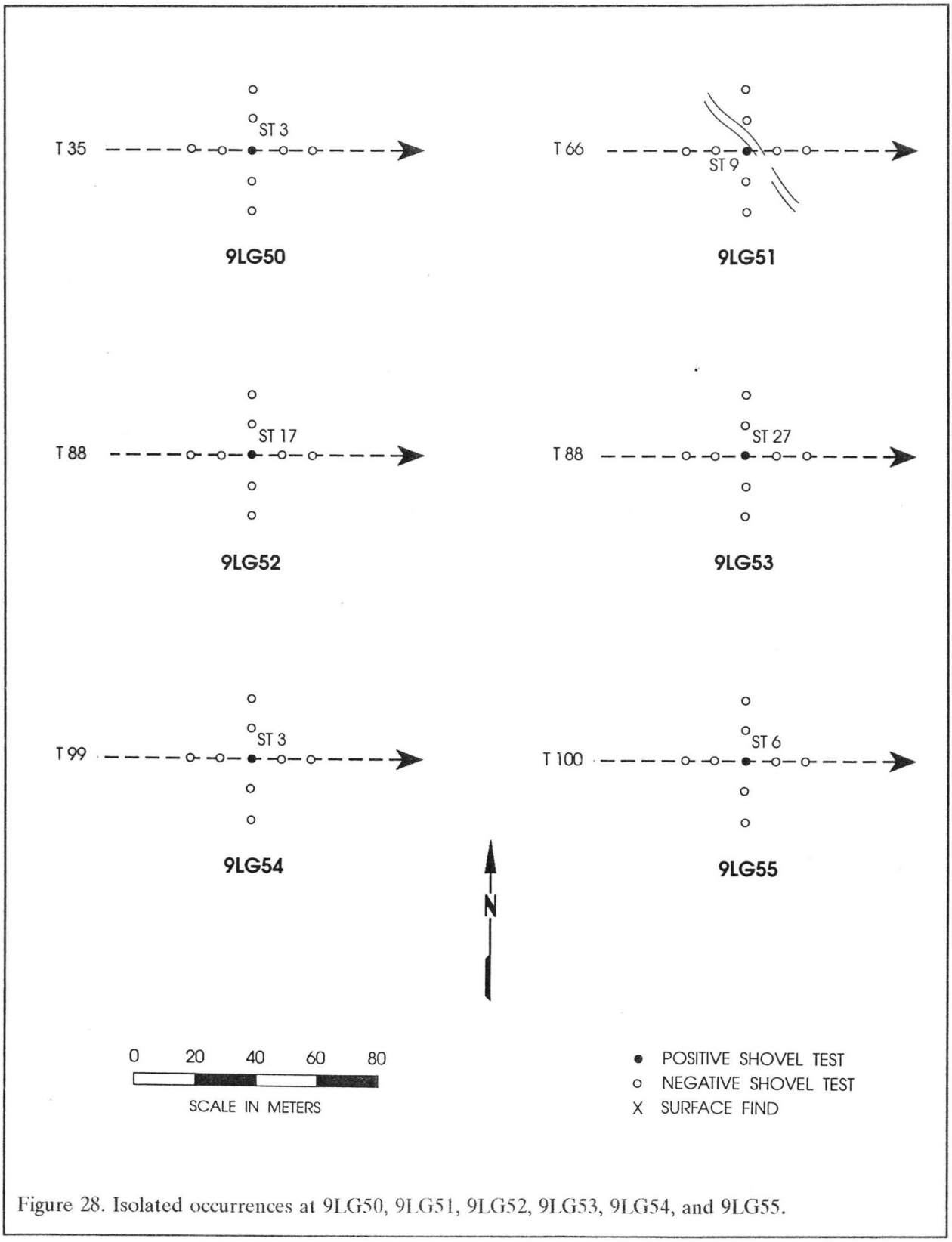


Figure 28. Isolated occurrences at 9LG50, 9LG51, 9LG52, 9LG53, 9LG54, and 9LG55.

and 29), however, to help the reader better understand the testing methodology. These occurrences have been given site numbers and are also illustrated on Figures 22 and 23.

All of these isolated occurrences, by definition, are normally considered not eligible for inclusion on the National Register of Historic Places by the State Historic Preservation Office and we are in concurrence with this assessment for each site.

9LG50

Site 9LG50 is an isolated occurrence recovered from ST 3 on T35. The site is located 30 m east of Fort Stewart Road 5 and 120 m south of the intersection of Fort Stewart Road 4 and Road 5. The central UTM coordinates are N3536793 E419575. Site elevation is 53 m above sea level.

The site is situated on a broad terrace. Vegetation consists of hardwoods and farm pine with hardwood understory. One unidentifiable nail fragment was recovered from the shovel test. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended. This site is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG51

Site 9LG51 is an isolated occurrence recovered from ST 9 on T 66. The site is located 30 m north of the intersection of the southern survey boundary fire break road and Fort Stewart Road FS33B. The central UTM coordinates are N3536320 E420620. Site elevation is 51 m above sea level.

The site is situated on a broad terrace which drops to a drainage approximately 50 m to the east. Vegetation at the site consists of hardwoods and farm pine with hardwood understory. Four wire nails were recovered from the shovel test. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended.

9LG52

Site 9LG52 is an isolated occurrence recovered from ST 17 on T 88. The site is located 249 m south of Fort Stewart Road 4 and 510 m east of a fire break road which intersects with Fort Stewart Road 4 and Road 5. The central UTM coordinates are N3536958 E420130. Site elevation is 53 m above sea level.

The site is situated on a broad terrace. Vegetation consists of hardwoods and farm pine with hardwood understory. One secondary flake was recovered. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended.

9LG53

Site 9LG53 is an isolated occurrence recovered from ST 27 on T 88. The site is located 360 m south of Fort Stewart Road 4 and 90 m west of Fort Stewart Road FS33B. The central UTM coordinates are N3537060 E420350. Site elevation is 51 m above sea level.

The site is situated on a slight ridge which slopes to a drainage approximately 400 m to the north. Vegetation at the site consists of hardwoods and farm pine with hardwood understory. One secondary flake was recovered. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended.

9LG54

Site 9LG54 is an isolated occurrence recovered from ST 3 on T 99. The site is located 30 m south of Fort Stewart Road 4 and 240 m west of Fort Stewart Road FS33B. The central UTM coordinates are N3537380 E420510. Site elevation is 50 m above sea level.

The site is situated on a slight ridge which slopes to a drainage approximately 300 m to the north. Vegetation at the site consists of

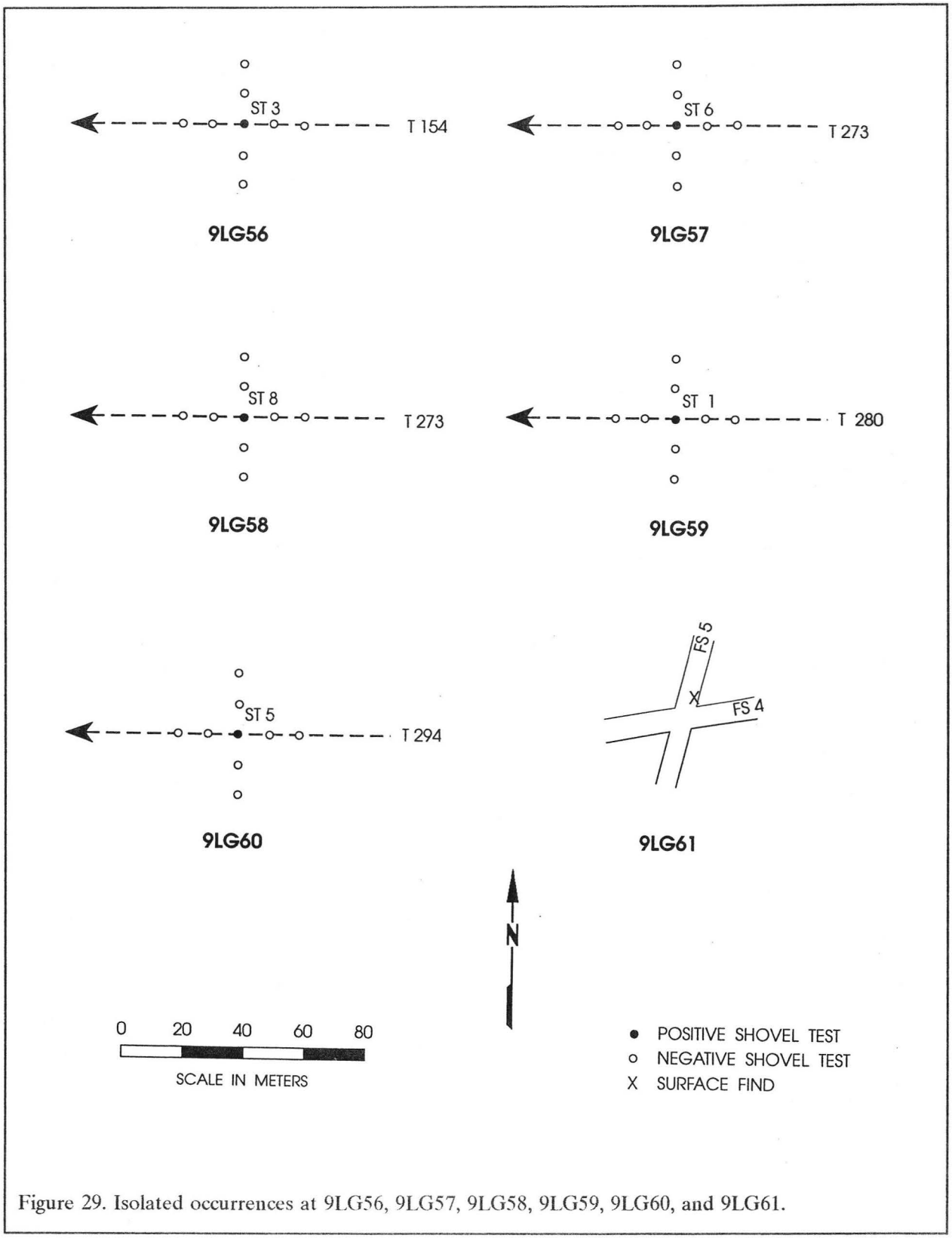


Figure 29. Isolated occurrences at 9LG56, 9LG57, 9LG58, 9LG59, 9LG60, and 9LG61.

hardwoods and farm pine with hardwood understory. One secondary flake was recovered. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended.

9LG55

Site 9LG55 is an isolated occurrence recovered from ST 6 on T 100. The site is located 60 m south of Fort Stewart Road 4 and 40 m west of Fort Stewart Road FS33B. The central UTM coordinates are N3537423 E420674. Site elevation is 48 m above sea level.

The site is situated on a slight ridge which slopes to a drainage approximately 200 m to the north. Vegetation at the site consists of hardwoods and farm pine with hardwood understory. Two secondary flakes were recovered. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended.

9LG56

Site 9LG56 is an isolated occurrence recovered from ST 3 on T154. The site is located 400 m north of Fort Stewart Road 4 and 200 m west of Fort Stewart Road 5. The central UTM coordinates are N3537345 E420338. Site elevation is 54 m above sea level.

The site is situated on a slight ridge which slopes to a drainage approximately 200 m to the north. Vegetation at the site consists of hardwoods and farm pine with hardwood understory. One secondary flake was recovered. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended.

9LG57

Site 9LG57 is an isolated occurrence recovered from ST 6 on T273. The site is located 1,100 m north of Fort Stewart Road 4 and 700 m west of Fort Stewart Road 5. The central UTM coordinates are N3537600 E418900. Site elevation is 53 m above sea level.

The site is situated on a terrace which slopes to a drainage of Slades Branch approximately 400 m to the west. Vegetation at the site consists of hardwoods and farm pine with hardwood understory. One secondary flake was recovered. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended.

9LG58

Site 9LG58 is an isolated occurrence recovered from ST 8 on T 273. The site is located 1,100 m north of Fort Stewart Road 4 and 640 m west of Fort Stewart Road 5. The central UTM coordinates are N3537610 E418960. Site elevation is 53 m above sea level.

The site is situated on a terrace which slopes to a drainage of Slades Branch approximately 460 m to the west. Vegetation at the site consists of hardwoods and farm pine with hardwood understory. One secondary flake was recovered. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended.

9LG59

Site 9LG59 is an isolated occurrence recovered from ST 1 on T 280. The site is located approximately 500 m north of Fort Stewart Road 4 and 500 m west of Fort Stewart Road 5. The central UTM coordinates are N3537390 E419079. Site elevation is 54 m above sea level.

The site is situated on a slight ridge which slopes to a drainage of Slades Branch approximately 100 m to the west. Vegetation at the site consists of hardwoods and farm pine with hardwood understory. One secondary flake was recovered. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended. This site is determined to be not eligible for the National Register of Historic Places.

9LG60

Site 9LG60 is an isolated occurrence recovered from ST 5 on T 294. The site is located 270 m north of Fort Stewart Road 4 and 150 m west of a fire break road which runs northeast from Fort Stewart Road 4. The central UTM coordinates are N3537038 E418625. Site elevation is 51 m above sea level.

The site is situated on a broad terrace which slopes to a drainage of Slades Branch approximately 100 m to the north. Vegetation at the site consists of hardwoods and farm pine with hardwood understory. One secondary flake was recovered. Eight shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and no further work is recommended.

This site, like the other isolated finds, is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG61

Site 9LG61 is an isolated occurrence recovered from the northeastern quadrant of the intersection of Fort Stewart Road 4 and Fort Stewart Road 5. Identified as a probable Small Savannah River Stemmed (Oliver 1981:1151, 154) projectile point, it measures 48.60 mm in overall length, has a haft length of 12.27 mm, a blade width of 29.57 mm, a blade thickness of 7.65 mm, and a haft thickness of 6.84 mm. It was made of coastal plain chert.

The two road beds provided excellent surface visibility and were walked for a distance of at least 40 m in all directions in lieu of shovel tests.

No other materials were identified and the most likely explanation is that the point was brought in as road fill. Alternatively, this may represent the loss of a point by a Late Archaic or Early Woodland hunter. Regardless, this site is recommended as not eligible for inclusion on the National Register.

Taylors Creek Survey Area

Previously Recorded Sites

9LI307

Site 9LI307 is located west of Fort Stewart Road 4 and north of Fort Stewart Road 144. The site is located on the southern edge of Fort Stewart Pond 4 within Fort Stewart Food Plot 382385. The UTM coordinates are reported as N3533620 E438180. The site is situated on a slight rise along the drainage edge and the surrounding vegetation consists of mixed hardwood and pine. The elevation at the site is 18 m above sea level and it was reported to be 1600 m^2 in size (Figures 23 and 30).

The site was originally identified by Fort Stewart Base archaeologist Thomas J. Pluckhahn in June 1994. He collected and identified one Deptford Simple Stamped sherd, one sand tempered cord marked (probably Savannah) sherd, and one sand tempered plain sherd. Three shovel tests were excavated and all were negative. It therefore appears that the site spanned the Middle Woodland and possibly Early Mississippian periods. These materials, like those from 9LI362, were passed on to Chicora Foundation during our field survey. While not required by the scope, we agreed to curate the collection with materials which we might obtain from the site.

Although the site possessed a very low artifact density Pluckhahn recommended that the surrounding woods should also be tested before it was evaluated for the National Register of Historic Places.

During Chicora's survey of the Taylors Creek tract, Transects 31 through 33 covered the reported site area, including the surrounding woods. The previous site area, which had moderate ground visibility, was also examined for evidence of surface materials. In an effort to locate any subsurface materials which may have been missed by the transect lines, the field was bisected north-south and east-west with eight shovel tests. No surface or subsurface remains were recovered from the shovel tests.

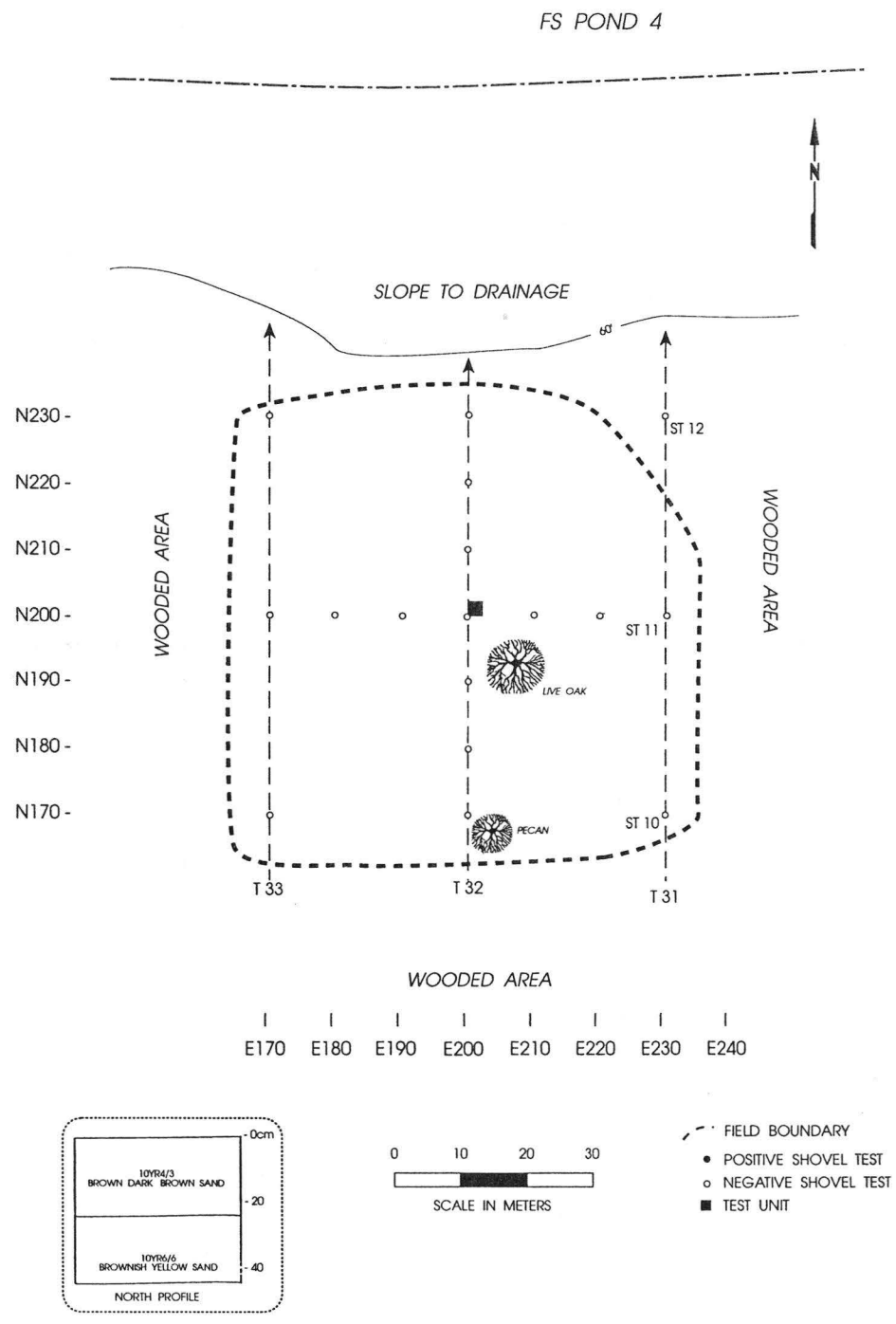


Figure 30. Reputed location of 9LI307 showing the topography and shovel tests.

Although no evidence of the site could be found in either the woods or the field, a single 50 cm test unit was excavated to document the soil profile. About 22 cm of dark brown (10YR4/3) sandy plowzone was found over the brownish yellow (10YR6/6) subsoil. The unit was excavated to a depth of about 43 cm, but no materials were recovered.

Given the very low density of surface material during the initial survey and the absence of surface or subsurface remains during this study, we can only conclude that this site has been completely collected. Site 9LI307 is recommended as not eligible for inclusion on the National Register and no additional investigations are recommended.

9LI311

Site 9LI311 encompasses the former community of Taylors Creek and is located east of Georgia Sate Highway 119, north and south of Fort Stewart Road 144, and east and west of Fort Stewart Road 40 (Figures 23, 31, and 32). The revised UTM coordinates, collected in the vicinity of the Taylors Creek School steps, are N3533295 E439007. The site occupies one of the highest points between the Canoochee Creek drainage to the north and Cedar Bay to the south, fed by Taylors Creek. The elevation at the site is 22 m above sea level and it is approximately 815,625 m^2 in extent.

The site was originally identified for the Georgia State Site Files by Fort Stewart base archaeologist Thomas J. Pluckhahn in July 1994. He collected five whiteware, one blue sponged whiteware, one decalcomania whiteware, one annular whiteware, and one blue edged whiteware. No subsurface testing was conducted during the 1994 survey. Pluckhahn stated in his site report that:

> This is the historic community of Taylors Creek, which dates to the mid-eighteenth century. Scatter of historic artifacts in food plot #390328 and in the small roads/trails which traverse the area. Discontinuous distribution suggests possibility of delineating structures, but few architectural features evident with the exception of one pier. Shovel testing needed to assess integrity of the site as it as been heavily impacted by training maneuvers (9LI311 site form, University of Georgia, Athens).

The site was listed by Pluckhahn as being recommended potentially eligible for inclusion on the National Register, although the condition of the site is listed as cultivated and graded.

Vegetation at the site consists of hardwoods and pine along with a substantial amount of low lying areas, some with standing water. The central town core contains primarily oak and pine. Some of the oaks may possibly exceed 150 to 200 years in age. There is very little underbrush present at the central town site where surface visibility is 50% or better in most areas. The remainder of the site contains a substantial quantity of pine along with scrub oaks. There is very little surface visibility over these outlying portions of the site. As became evident during the study, the vast majority of the site has been affected by military operations involving heavy or track vehicles.

In all areas of the site shovel testing at 30 m intervals, as defined in the scope of work, was used to determine the overall size of the site, as well as its vertical integrity (Figure 32). Modifications to that scope were defined in the Research Strategy and Methods section of this report.

Very few surface artifacts were recovered within the overall site boundaries. The majority of artifacts recovered from either surface collections or positive shovel tests range in date from the mid-nineteenth century to the late twentieth century (see Figure 32 and Table 5). All late twentieth century artifacts are considered intrusive since the town was taken over by the military in the 1940s. The mean ceramic date for the artifacts is 1854.3 (Table 5).

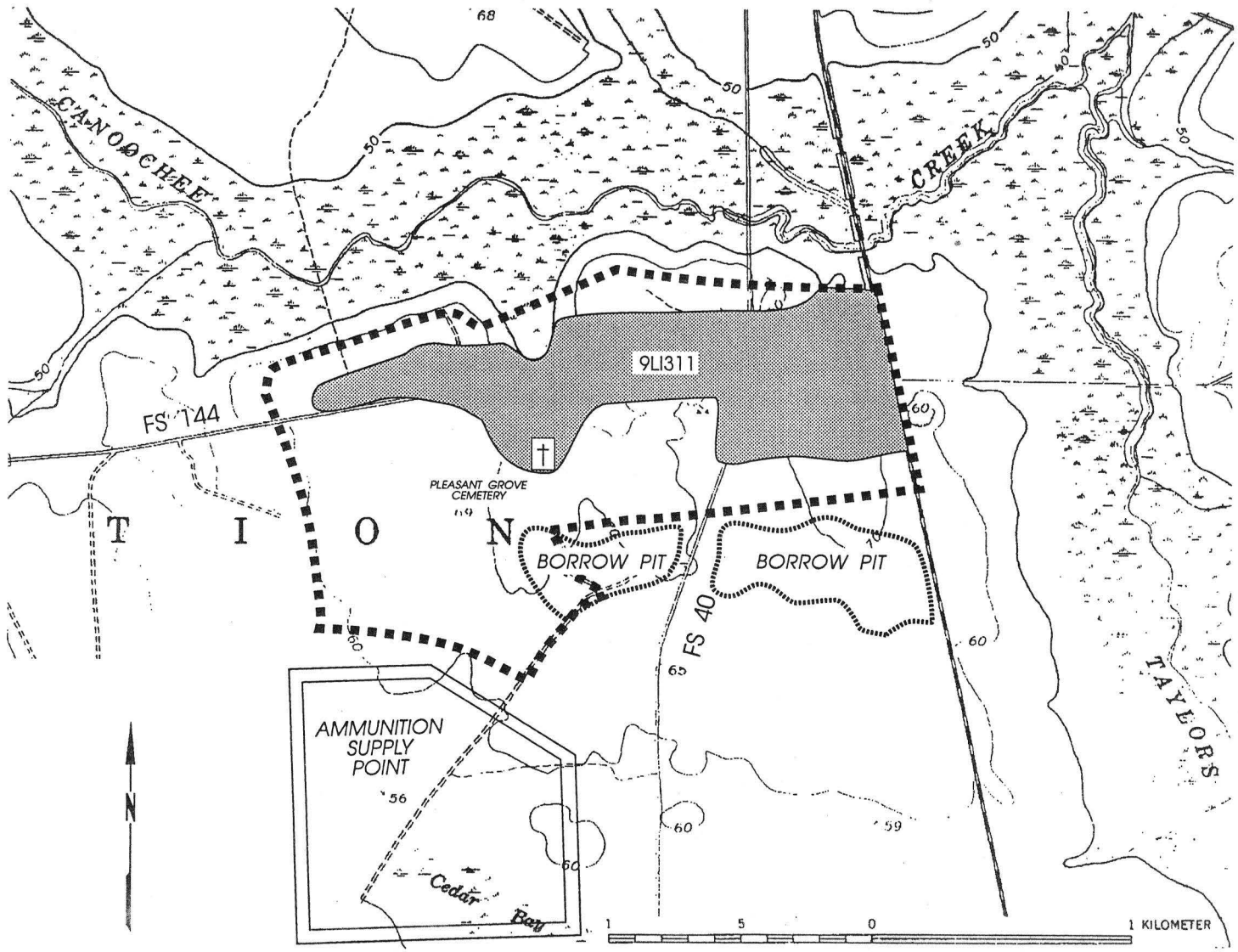


Figure 31. Map of 9LI311 showing its general location in relationship to the Taylors Creek survey tract and adjacent topographic features.

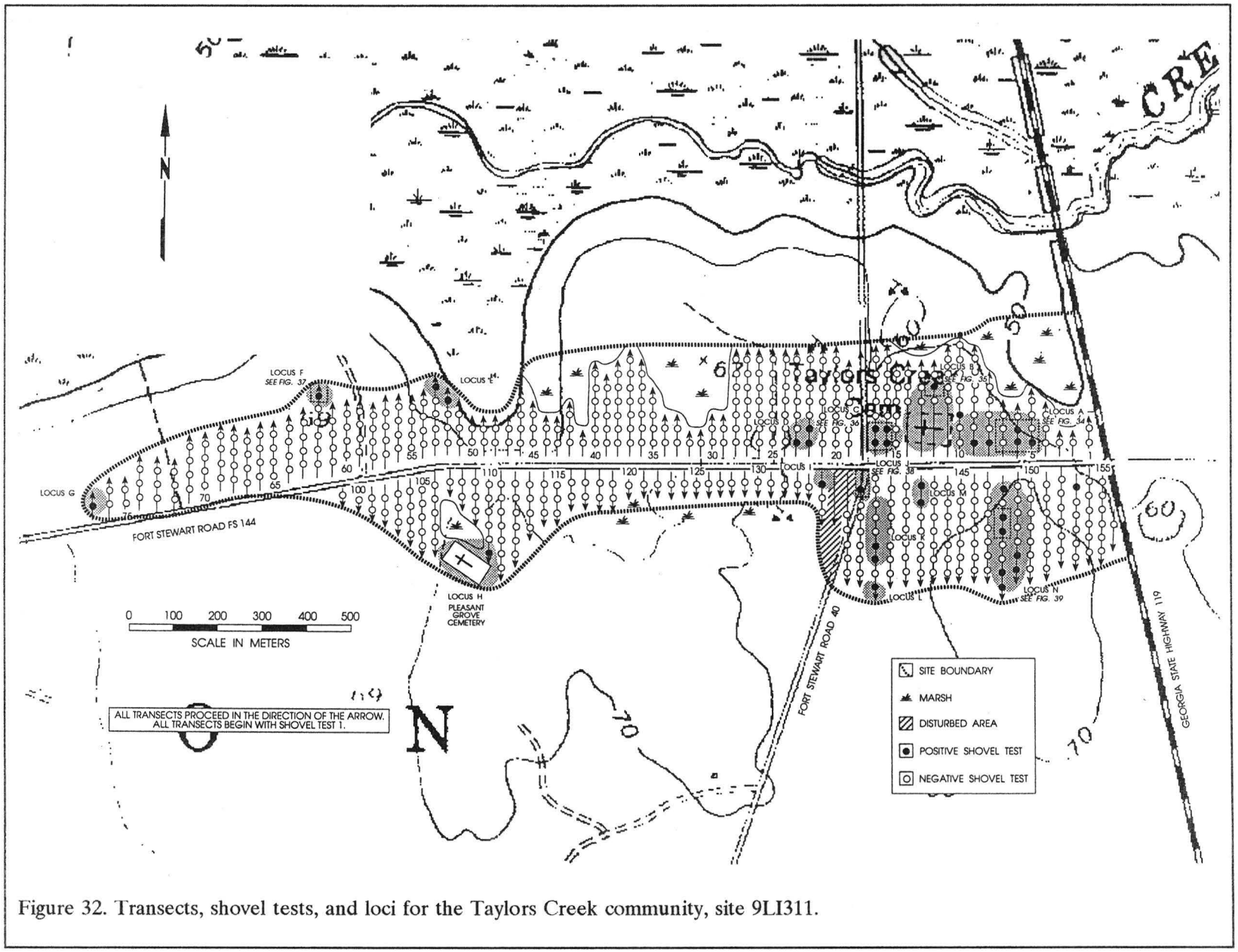


Figure 32. Transects, shovel tests, and loci for the Taylors Creek community, site 9LI311.

Table 5.
Historic Artifacts Recovered from 9LI311 and the Associated Mean Ceramic Date

Kitchen Group Artifacts	**182**	**52.0 %**
delft, decorated	1	
pearlware, blue edged	1	
whiteware, undecorated	28	
blue hand painted	1	
poly hand painted	3	
blue transfer print	2	
molded	1	
annular	3	
sponged	1	
yellowware	2	
white porcelain	1	
bisque porcelain	1	
burnt red EW	1	
coarse red EW	1	
alkaline glazed SW	1	
aqua glass	40	
black glass	3	
blue glass	1	
brown glass	7	
clear glass	66	
lt. green glass	1	
green glass (modern)	1	
manganese glass	7	
pink glass	1	
tin can fragments[1]	5	
jar lids	2	
Architecture Group Artifacts	**136**	**39.1 %**
machine cut nails	9	
wire nails	18	
UID nails[1]	68	
window glass	41	
mortar/brick fragments[2]	55	
Clothing Group Artifacts	**2**	**0.6 %**
brass buckle	1	
brass grommet	1	
Furniture Group Artifacts	**5**	**1.4 %**
kerosene lamp cover	1	
lamp glass	4	
Personal Group Artifacts	**2**	**0.6 %**
brass ferrule	1	
nail polish bottle	1	
Activity Group Artifacts	**22**	**6.3 %**
turpentine pot fragments	5	
UID brass tube	1	
UID iron fragments	2	
nut	1	
barbed wire fragments[1]	10	
brass bell fragment	1	
iron staple	1	
coal fragment	1	
Other		
modern intrusive trash[3]	11	
flakes[4]	2	
sherds[4]	2	

[1] These items were observed and counted in the field, but were not collected. They are included in the group percentages.

[2] These items were observed and counted in the field, but were not collected. They are not included in the group percentages.

[3] These items were collected to document the extensive disturbance at the site, but are not included in the group percentages.

[4] These items reflect prehistoric materials found at the site. They are not, however, included in the group percentages.

Mean Ceramic Date for Collected Ceramics

Ceramic	(xi)	(fi)	fi x xi
Delft, decorated	1	1750	1750
Pearlware, edged	1	1805	1805
Whiteware, hp	4	1848	7392
blue tp	2	1848	3696
annular	3	1866	5598
sponge	1	1853	1853
undec.	28	1860	52080
Yellowware	2	1853	3706
	42		77880

77,880 ÷ 42 = 1854.3

This date is earlier than the mean historic date of 1891 for the town site and implies that some settlement may have been present in the project area prior to 1841 when the town was supposed to have been moved from its original creekside location to higher ground. If so, this would suggest that the Taylors Creek of 1790 to 1840 was quite similar to the Taylors Creek of 1841 to 1941 — consisting of a central core surrounded by a number of dispersed farmsteads. Alternatively, it is possible that the seemingly early mean ceramic date may reflect curation of artifacts brought by the residents to the new town site from their earlier homes.

Table 6.
Comparative Archaeological Patterns

	Charleston 1720-1760[1]	Charleston 1760-1830[1]	Charleston 1830-1880[1]	Revised Carolina[2]	Piedmont Tenant/Yeoman[3]
Kitchen	55.81	58.47	43.63	58.40	45.6
Architecture	26.00	33.64	48.32	28.30	50.0
Furniture	0.25	0.20	0.18	0.40	0.4
Arms	0.19	0.30	0.24	0.20	-
Tobacco	11.25	4.45	1.39	7.90	-
Clothing	0.64	1.13	3.52	3.00	1.8
Personal	0.29	0.45	0.61	0.35	0.4
Activities	5.47	1.31	2.05	1.30	1.8

[1] The City of Charleston patterns are from Zierden et al. 1995:Table 8
[2] Revised Carolina Artifact Pattern is from South (1977) and Garrow (1982)
[3] Drucker et al. 1984

Of considerable interest is the pattern analysis of the collection recovered from Taylors Creek (Table 6). While representing both a spatial and chronological amalgam, further confused by extensive (and intensive) site disturbance, the data are nevertheless interesting.

Kitchen artifacts dominate the collection, followed by architectural remains. While we assume that the architectural category is deflated, as a result of the military's wholesale removal of the town and its structures, it is impossible to determine to what extent. In fact, the presence of nails and window glass suggests that many remains are still present, perhaps reflecting repair and renovation while the town was still intact. The absence of architectural hardware, on the other hand, suggests that useable materials were stripped from town prior to its removal by the United States Army. The activity artifacts also stand out, accounting for 6.3% of the collection.

When the collection is compared to other artifact patterns, it appears to represent a curious blend of previously identified patterns. For example, even not knowing the impact of military demolition on the architectural remains, the Taylors Creek Kitchen/Architecture ratio when compared to that from urban Charleston, suggests a similar increase in kitchen related materials characteristic of the later historic period. As glass became less expensive it tends to swell the kitchen artifact category — a phenomena suggested from the Taylors Creek collection. Unless there has been an exceptional removal of architectural material, the Taylors Creek collection seems to bear a stronger resemblance to the urban setting than it does to the tenant pattern where kitchen and architectural remains are nearly equal — a result of the combination of increased access to glassware and wood frame construction with multiple repair episodes.

While the proportion of activity artifacts does not fit any of the previously identified patterns, it nevertheless seems reasonable given the nature of Taylors Creek. As a small crossroads community serving a variety of functions it seems reasonable that the archaeological record would reflect a broad range of activity-related artifacts. Certainly the turpentine pot fragments are indicative of the towns setting and the importance of naval stores to late nineteenth century Georgia. The presence of the bell fragment may be evidence of the Taylors Creek school.

Perhaps most interesting is the absence of tobacco related paraphernalia. This is also seen in only the tenant/yeoman farmer pattern and seems to be indicative of a particular cultural and social situation. As an alternative, it has been suggested that it may reflect the special religious connections that the town and its residents had with the Methodist Church.

The artifacts recovered from 9LI311 suggest a mid-nineteenth century to mid-twentieth century community. Many are similar to specimens

1. James M. Caswell
2. Samuel S. Martin
3. 1st J.J. Martin, 2nd David J. Sheppard
4. Clifton Martin
5. 1st Franklin Pierce Martin, 2nd William Phillips
6. 1st Walter Lowry Stacy, 2nd C. Augustus May
7. George Floyd
8. William Alfred Martin
9. 1st James McFail, 2nd Eli McFAil, 3rd John G. Martin
10. John L. Shaw
11. 1st Robert Steel Hendry, 2nd Lloyd Hendry, 3rd Wilton Bacon, 4th Gus Jelks
12. Methodist Church
13. Cemetery
14. Club Store & 1st Post Office
15. John G. Ryan
16. Futch Home
17. R.S. Hendry
18. Bird Water Mill
19. Israel L. Bird
20. 1st Robinson Bird, 2nd William H. Bradley
21. Enoch Hendry
22. 1st Fred Hendry, 2nd James R. Hendry
23. Littleberry Hendry
24. 1st O.J. Olmstead, 2nd O. John Olmstead
25. William May
26. J.M. Caswell
27. First Cemetery
28. 2nd Post Office
29. 1st James Winn Laing, 2nd L.E. Stafford
30. Old Wooden Schoolhouse
31. 1st Berry D. Martin & P.O., 2nd David Jackson Martin
32. Once a Baptist Church
33. Arthur Floyd
34. 1st Jane Bradley, 2nd William Ryon, 3rd Corbitt Porter
35. 1st John Sylvester Shuptrine, 2nd John S. Shuptrine
36. Joseph M. Bradley
37. Camp Ground
38. 1st Henry McGillis, 2nd L.E. Stafford, 3rd Herbert Porter
39. Dr. Alfred I. Hendry
40. James R. Hendry
41. Enoch V. Martin
42. Sam Bradley
43. Mellwood School
44. James Roberson Martin
45. Billy Sheppard
46. William H. Martin
47. John A. Martin Water Mill
48. 1st John A. Martin, 2nd Edward B. Mims, 3rd Edward B. Mims, Jr.
49. John A. Martin
50. S.P. Porter
51. 1st Angus Martin, 2nd D. Lonnie Martin
51 1/2. Paul Martin
52. 1st Joseph Jackson Martin, 2nd Rufus Martin
53. H. Carlos Laing
54. Angus Laing
55. Berry D. Martin
56. 1st Sam Martin, 2nd Mrs. Mary E. Jones, 3rd Claud E. Stafford
57. Ivey Home
58. Colored Church
59. Elizabeth & Ann E. Shumatt
60. 1st John Angus Martin, 2nd Olin Strickland
61. E.C. Martin
62. 1st Garrison Home, 2nd Jack Way
63. R.S. Hendry's Turpentine Still
64. 1st R.S. Hendry store, 2nd S.P. Porter store
65. 1st Charlie E. Stacy, 2nd Herbert Porter
66. Cotton Gin
67. Lumber Mill
68. 1st Dr. H.R. Mooney, 2nd E.C. Martin store
69. 1st F.P. Martin, 2nd Mrs. E.M. Elder, 3rd Walter Cohan
70. D.J. Martin store & P.O.
71. Dr. Allen Jones
72. New Parsonage
73. 1st Bill Floyd, 2nd William Floyd, 3rd Newman Bradley
74. 1st Carl A. Ryon, 2nd C.A. May, 3rd Jiley Williams
75. 1st Old Parsonage, 2nd J.J. Martin, 3rd Peyton Floyd
76. 1st Joseph O. Davis, 2nd "Hattaway Place"
77. New Brick School
78. Whitten Store
79. 1st "Mills Place," 2nd Dan Bradley, 3rd William A. Whitten, 4th D.J. Martin
80. Darlot Post Office
81. 1st R.F. Ham, 2nd Wallace Strickland
82. 1st Dr. Abram Bird Daniel, 2nd Frank Sheppard
83. 1st Joseph I. Daniel, 2nd "Lucius Hardee " Family
84. Jim Butler Place

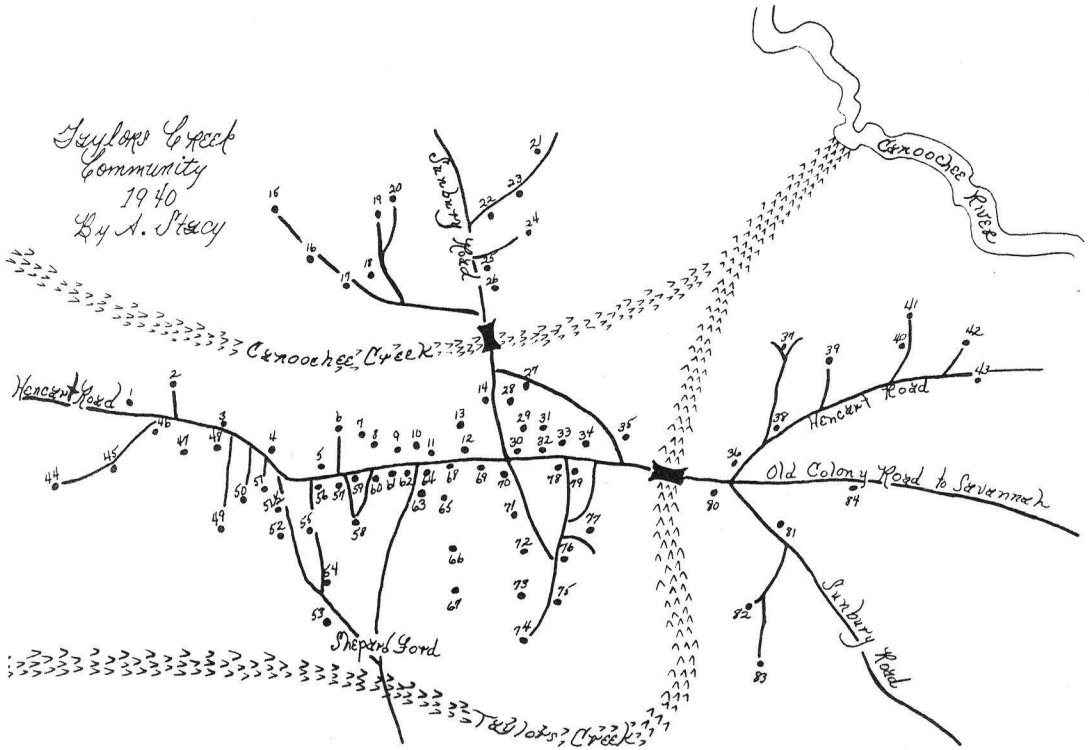


Figure 33. Copy of the 1940 Stacy sketch map of Taylors Creek (adapted from Yarborough and Yarborough 1986:130-131).

recovered from the two historic sites, considered individual farmsteads or dispersed settlements, located withinthe JAECK drop zone. The primary difference in the assemblages is not seen at the individual specimen level, but rather in the density and diversity of the Taylors Creek assemblage, which indicates the heavier, and denser, occupation of specific loci in the community.

Two 50 cm shovel test units were excavated within, or adjacent to, the town limits. One, excavated in the core of the town, was situated near the posited location of the Taylors Creek School. This unit reflects the scope of work mandated unit for the site. A second test unit was excavated to document site conditions at what appeared to be an early component for the town at 9LI311-F. The first test unit was excavated to a depth of 50 cm, the soil profile of this unit consists of 22 cm of light yellowish brown (10YR6/4) sand overlying 38 cm of light yellowish brown (10YR5.54) sand. The soil profile of the second test unit consists of 13 cm of very dark grayish brown (10YR3/2) fine sand overlying 47 cm of pale brown (10YR6/3) fine sand.

This site incorporates areas of well drained Blanton and Stilson soils, although most of the town is situated on poorly drained Albany, Leefield, Mascotte, and Pelham soils. In addition, two borrow pits are found within the site limits of the town (one on the northeast edge and another at the south central edge, see Figure 8).

Artifacts recovered from this test unit level (0-10 cm) were all of modern origin except for one piece of aqua glass. Other artifacts from this level included a Tiparillo mouthpiece, an unidentified rubber fragment, and one fabric fragment of woven synthetic fibers with a plastic layer (most likely a fragment of a military poncho). At 40 to 50 cm — the bottom of the excavation — a fibrous cigarette filter tip was recovered in situ. This test pit, in particular, documents the exceptional amount of disturbance which characterizes broad expanses of this site.

The current survey was designed to re-established the community's boundaries and address the potential for listing the community of Taylors Creek on the National Register of Historic Places. It was determined from this study that the town limits extended considerably farther than the original site report, filed in July 1994, had indicated. This was because Taylors Creek was an extended community which encompassed a number of individual site locations, i.e., small farms and homesteads, within those extended communal boundaries. These included a number of locations within and outside of the main central area of town that were discovered to correspond with historic data acquired during the course of these investigation. There were a number of finds that can be directly related to the community and are considered as internal loci of site 9LI311.

These are listed below and noted as 9LI311-A, 9LI311-B, 9LI311-C, etc. and are illustrated on Figure 32. Some of the different areas received close interval testing and these are illustrated in greater detail in the accompanying figures. The artifacts from each area are briefly mentioned in the text and more fully listed in Table 7.

9LI311-A

Site area 9LI311-A is located 150 m to 270 m west of Georgia State Highway 119, 30 m to 60 m north of Fort Stewart Road 144, and 60 m east of the Taylors Creek Cemetery (Figures 32 and 34). The loci is bisected by the turn of the century north-south Sunbury Road as it leads north from the east-west Hencart Road. A large scatter of historic artifacts, this area also contains a number of small brick scatters, perhaps relating to a structure or more likely push piles from the town's demolition, as well as two post from an old fence line.

Artifacts recovered from this area, or observed but not collected, during the survey included construction materials, i.e. nails, both wire cut and machine cut, brick fragments, and window glass, as well as a number of glass fragments, a small clear glass bottle which held nail polish, and a brass eraser head for a wooden pencil.

This area corresponds with a number of structures defined by the 1940 map of Taylors

Table 7.
Artifacts Recovered from Taylors Creek by Loci.

	D	PW	WW	CEW	SW	P	OC	BG	OK	N	WG	OA	B	TP	UIDI	O	PP	F	MT
Locus A																			
T 5, ST 1			2					16		4									
T 6, ST 1			1																
T 6, ST 2			3	1				12		1	10					1			
T 5/6 N180E200								5											
T 6N210E170			1					1											
T 5/6 N230E190			1																
T 6 N250E170															1				
T 8, ST 1								2											
T 8/9 N180E150										3									
T 8/9 N189E200								4											
T 9, ST 1								2		1	3					1			
T 10, ST 3								1											
Locus B																			
T 12, ST 2																	2	1	
Locus C																			
T 16, ST 1										1									
T 16, ST 2			1					3			2		1						
T 16 N240E200								1											
T 16 N250E200			1																
T 17, ST 1			1	1		1	1	3		1									
T 17, ST 2			1		1										1				
Locus D																			
T 22, ST 1, sur		1																	
T 22, ST 1								2		1	1								
T 22, ST 2			1																
T 23, ST 1											1								
Locus E																			
T 52, ST 4			1																
T 52, ST 5			1																
Locus F																			
T 62 N160E360	1																		
T 62 N180E360						1													
Locus G																			
T 77, ST 1															1				
Locus H																			
T 11, ST 6								2			1								
Locus I																			
T 135, ST 1								3		1									
Locus J																			
T 138 N200E280			1					6											
T 138, ST 2								1											
Locus K																			
T 139, ST 6														1					
T 139, ST 7			4																
Locus L																			
T 139, ST 9										1									
Locus K and L																			
T 139 surface			14				2	8										1	
Locus M																			
T 142, ST 1			1					3											
T 142, ST 2								1			1								
T 144 surface			1																
Locus N																			
T 148, ST 1								1			1								
T 148, ST 3											17								
T 148, ST 4			1					45	2	13				2					
T 148, ST 7			1					3		1	4					2			
T 148, ST 8								3		1									
T 149, ST 6												1							
T 149, ST 7			1								1					1			
Miscellaneous Areas																			
T 153, ST 1																			3
TU 6, Lv. 1								1											3
TU 6, Lv. 5																			1

D = delft; PW = pearlware; WW = whiteware; CEW = coarse earthenware; SW = stoneware; P = porcelain; OC = other ceramic; BG = bottle/container glass; OK = other kitchenware item; N = nails; WG = window glass; OA = other architectural; B = buckle; TP = turpentine pot; UIDI = unidentifiable iron; O = other historic artifact; PP= prehistoric pottery; F = flake; MT = modern trash (evidencing disturbance)

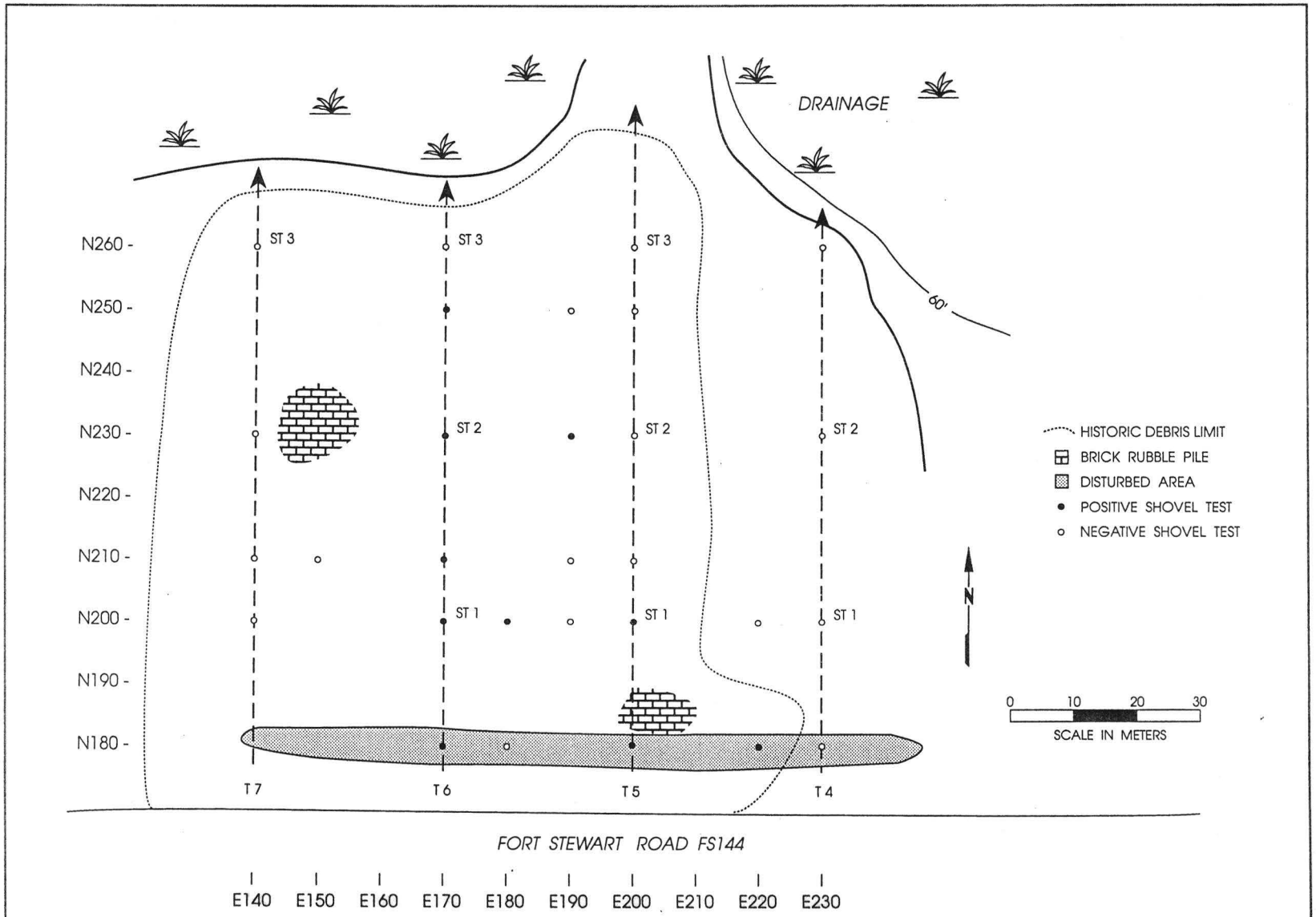


Figure 34. Locus A at 9LI311.

community by A. Stacy (Yarbrough and Yarbrough 1986:130-131; Figure 33). These structures include possibly the home of L.E. Stafford (numbered 29 on Figure 33), the old wooden school house (numbered 30 on Figure 33), the home of David Jackson Martin (numbered 31 on Figure 33), the former Baptist Church (numbered 32 on Figure 33), or the home of Arthur Floyd (numbered 33 on Figure 33). It is impossible to determine, based on the sketch map and the currently available oral history, which of these structures the historic scatter might represent.

9LI311-B

Site loci 9LI311-B is located 330 m west of Georgia Highway 119, 120 m east of Fort Stewart Road 40, and 30 m north of Fort Stewart Road 144 (Figures 32 and 35). This is the site of the former Taylors Creek Methodist Church and cemetery. This corresponds to locations 12 and 13 on the community map by A. Stacy done in 1940 (Figure 33). Shovel testing was not conducted in the immediate area of the cemetery since its exact boundaries are not well identified and deep shovel testing might have disturbed burials. Nearby shovel testing (T 12, ST 2) produced only a small quantity of prehistoric material. No cultural resources were recovered from the surface. UTM coordinates, however, were taken at this loci using GPS. The resulting coordinates for the Taylors Creek cemetery are N3533476 E438792.

9LI311-C

Site loci 9LI311-C is located 60 m west of the Taylors Creek Cemetery, 30 m north of Fort Stewart Road 144, and 30 m east of Fort Stewart Road 40 (Figures 32 and 36). This historic house site contains a small brick scatter, as well as the remains of a fairly modern (i.e., ca. 1930 or 1940) privy.

Cultural resources recovered from this area included construction materials, i.e. nails, both wire cut and machine cut, brick fragments, and window glass, a number of glass fragments, many melted, as well as modern whiteware and stoneware ceramics.

This area possibly corresponds with two structures defined by the 1940 map of the Taylors Creek community by A. Stacy (Figure 33). The artifacts recovered from this area are possibly the remains of the home of John L. Shaw (numbered 10 on Figure 33), or the home of Gus Jelks (numbered 11 on Figure 33).

9LI311-D

Site loci 9LI311-D is located 120 m west of Fort Stewart Road 40 and 30 m north of Fort Stewart Road 144. This possible historic house site contains a brick scatter, with few other associated artifacts.

Cultural materials recovered from this location included construction materials, i.e. wire nails, brick fragments, and window glass, several bottle glass fragments, one pearlware plate rim, and one undecorated whiteware ceramic.

This area corresponds with one structure defined by the 1940s map of Taylors Creek (Figure 33). The artifacts recovered are probably the remains of the home of John G. Martin (numbered 9 on Figure 33). The location of the Martin home has been confirmed through oral history acquired through an interview with Wyman May, a former resident of Taylors Creek (Wyman May, personal communication 1996).

9LI311-E

Site loci 9LI311-E is located 1,560 m west of Fort Stewart Road 40 and 120 m north of Fort Stewart Road 144. Only two artifacts — whiteware ceramics — were recovered from this area. Also observed, but not collected, was an unidentifiable nail fragment.

This area corresponds to the general area at the rear of structure 3 shown on the Stacy map (Figure 33) — a house initially owned by J.J. Martin and then by David J. Sheppard.

9LI311-F

Site loci 9LI311-F is located 1,860 m west

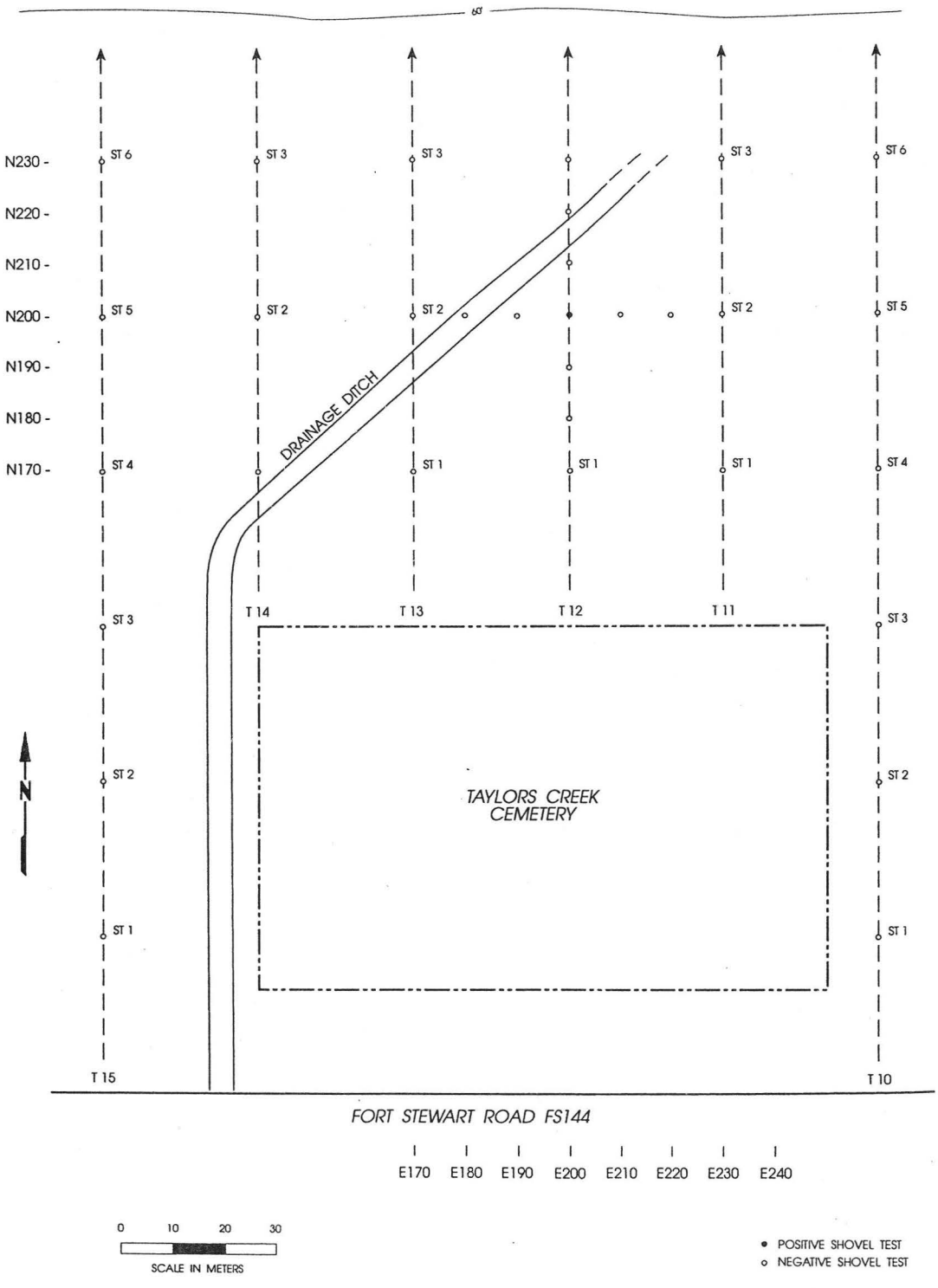


Figure 35. Locus B at 9LI311.

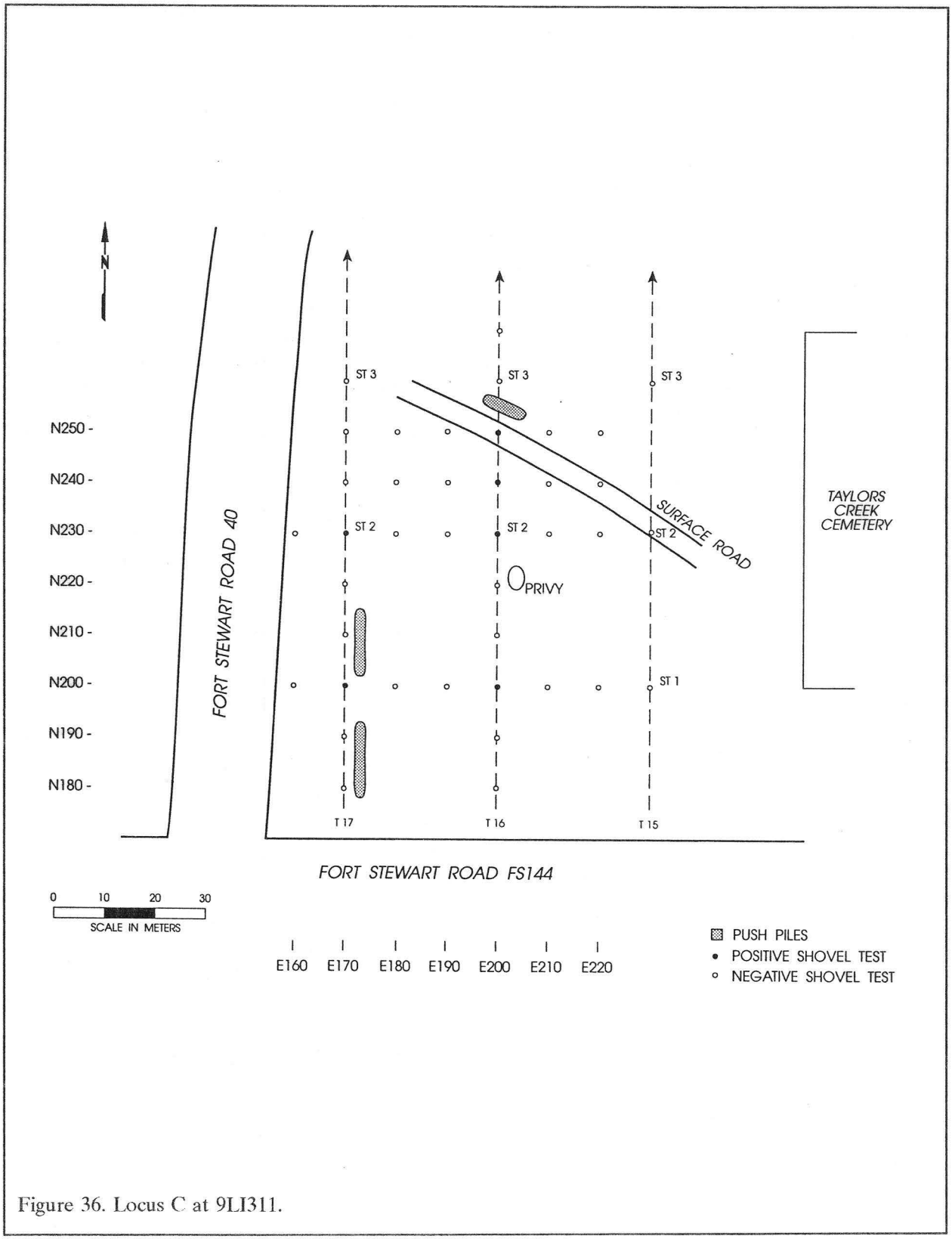


Figure 36. Locus C at 9LI311.

of Fort Stewart Road 40 and 270 m north of Fort Stewart Road 144 (Figure 32 and 37). This historic site was discovered during shovel testing for the prehistoric site 9LI357 and is located in a food plot to the southwest.

Very few cultural remains were observed or recovered from this area. They included a few small brick fragments, a decorated delft bowl rim, and a porcelain ceramic. Although this loci was disturbed by cultivation and military activities, the presence of the delft suggested that testing might be appropriate. A total of eight negative shovel test units were excavated, as well as one 50 cm test unit to a depth of 50 cm. The soil profile of this test unit consists of 13 cm of very dark grayish brown (10YR3/2) fine sand overlying 47 cm of pale brown (10YR6/3) fine sand. No artifacts were recovered from this test unit. The unit, however, did provide additional evidence of extensive disturbance in the Taylors Creek area.

According to the Stacy map, this is likely the area of the Samual S. Martin house (numbered 2 on Figure 33). According to Wyman May (personal communication 1996), the Martin family was one of the earliest families to settle in or near Taylors Creek and was also one of the primary land owning families.

9LI311-G

Site loci 9LI311-G is located 2,190 m west of Fort Stewart Road 40 and 30 m north of Fort Stewart Road 144. Cultural remains observed, but not collected, from this area included 12 unidentified nail fragments. One unidentified metal machine part was collected from T 77, ST 1.

According the 1940 Stacy map of Taylors Creek (numbered 1 on Figure 33), this loci corresponds to the probable location of the James M. Caswell house.

9LI311-H

Site loci 9LI311-H is located 900 m west of Fort Stewart Road 40 and 180 m south of Fort Stewart Road 144. This is the site of the Pleasant Grove Church cemetery. Although not tested for obvious reasons, UTM coordinates were taken at the site using GPS. The UTM coordinates for the center of the cemetery are N3533160 E437833.

This site is noted as the "colored church," location 58, on the 1940 Stacy map (Figure 33). According to oral history from former resident Wyman May (personal communication 1996), this area contained not only the African American church, but also a school and Masonic Lodge. This area seems to have been where the African American community at Taylors Creek conducted the majority of their social business and educated their children. Only three artifacts were recovered from this area during shovel testing — one window glass fragment, one fragment of melted aqua glass, and one brown glass fragment. The remains of two privies and a well pump were located northeast of the cemetery.

9LI311-I

Site loci 9LI311-I is located 60 m west of Fort Stewart Road 40 and 30 m south of Fort Stewart Road 144. Four artifacts (three glass fragments and one nail) were recovered from a single shovel test in this area. Surrounding tests failed to produce additional materials. This is surprising since the 1918 USGS map of Taylors Creek there were a number of buildings located in this area (Figure 17).

Oral history, acquired from interviews with Wyman May (personal communication 1996), indicated that the buildings shown on the 1918 USGS map were still located along and west of Fort Stewart Road 40 at the time the 1940 Stacy map was prepared. According to the Stacy map (Figure 33), the E.C. Martin (location 61 on Figure 33) and Jack Way (location 62 on Figure 33) houses were located in this area. Mr. May, however, stated that these were "tenant" houses rented out by a Mr. Porter, who owned the property. The majority of these people worked in the turpentine distillery which was located east of Fort Stewart Road 40 at location 63 on the Stacy Map.

Although there is some disagreement between the various sources, there was a small

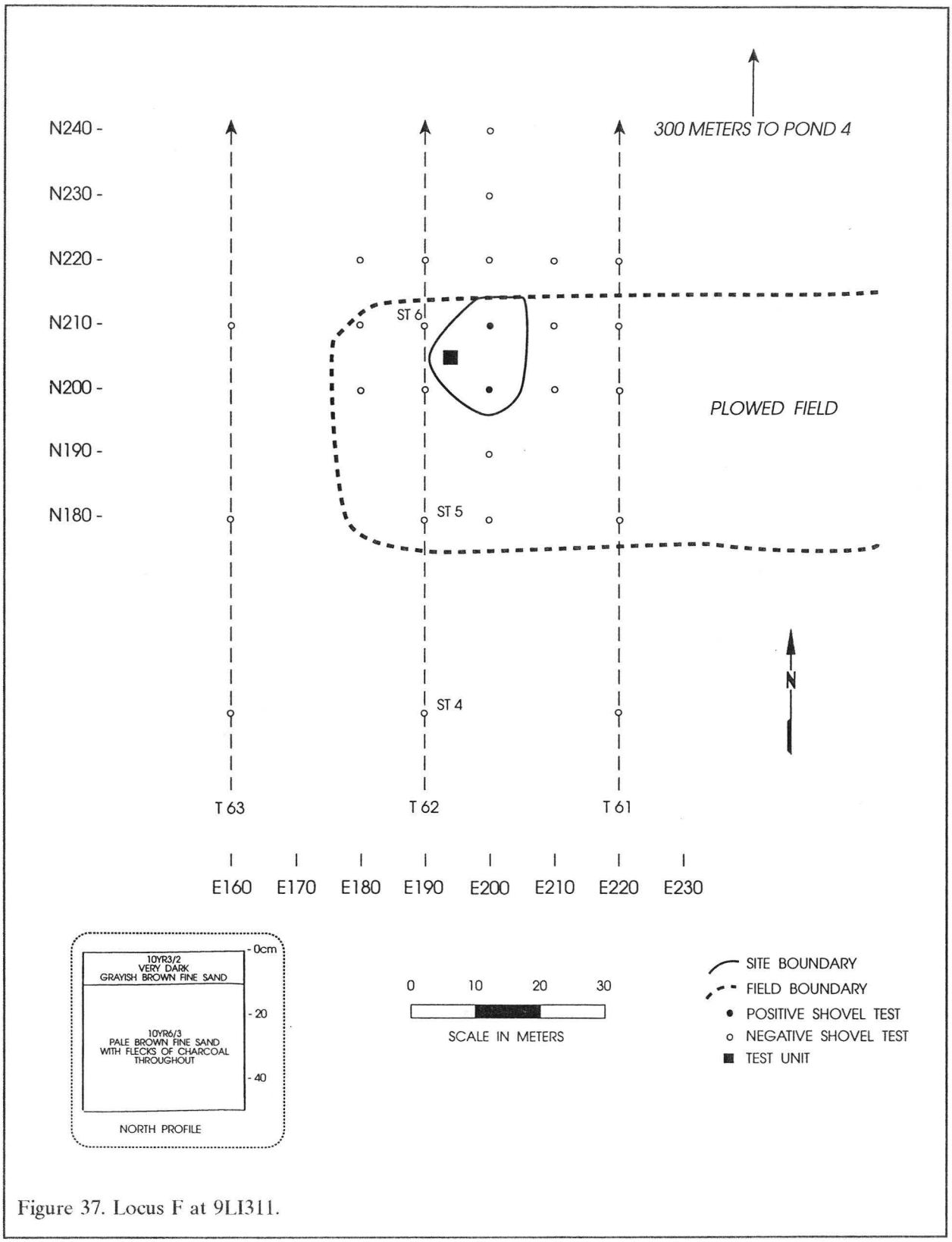


Figure 37. Locus F at 9LI311.

pocket of population in this area. The almost total absence of cultural remains is likely the effect of both the town's removal and subsequent use of the project area.

9LI311-J

Site loci 9LI311-J is located 15 m east of Fort Stewart Road 40 and 30 m south of Fort Stewart Road 144 (Figures 32 and 38). This area contains a scatter of surface artifacts, i.e., window and shelf glass (not collected), as well as a number of concrete blocks. Materials collected include a small quantity of predominately modern glass, aqua glass, and a single whiteware ceramic.

According to the Stacy map of 1940 this was the location of the S.P. Porter store (location 64 on Figure 33). Wyman May (personal communication 1996), confirms this location was the Porter General Store.

9LI311-K

Site loci 9LI311-K is located 15 m east of Fort Stewart Road 40 and 60 to 270 m south of Fort Stewart Road 144.

Cultural material recovered from this area included a turpentine pot fragment and a relatively large quantity of modern whiteware. Observed, but not collected, were several machine cut nail fragments. According to the Stacy map (Figure 33, location 63), this was the Taylors Creek turpentine distillery. Wyman May recalls it being further south of Fort Stewart Road 144 and west of Fort Stewart Road 40. Mr. May also states that Mr. Porter owned most of the land south of Hencart Road just to the east and west of Fort Stewart Road 40 and that south of Mr. Porter's store was Mr. Porter's Chevrolet or Packard automobile dealership. It should also be noted that according to the Stacy map, location 65 is referred to as the home of Herbert Porter.

9LI311-L

Site loci 9LI311-L is located 150 m east of Fort Stewart Road 40 and 180 m south of Fort Stewart Road 144. This area could possibly correspond with the location of the cotton gin, or the lumber mill (locations 66 and 67 on Figure 33).

Cultural remains observed at this location include machine cut and wire nails; concrete, mortar, and brick fragments; and window glass. The only material collected, however, was a single nail fragment from T 139, ST 9.

According to Mr. May (personal communication 1996), this area also held the Georgia Department of Transportation Maintenance building and the Methodist Parsonage, which was moved in 1941 to Hinesville. Mr. May recalls that the heavy equipment operator for the state had a directional board outside the building. If the sign said east, then local residents would then know which direction the roads were being graded and could avoid those areas, or if the maintenance person was required, they could be easily found.

9LI311-M

Site loci 9LI311-M is located 135 m east of Fort Stewart Road 40 and 30 m south of Fort Stewart Road 144. Cultural remains observed or recovered from this location include window glass, clear bottle glass, and whiteware ceramics. This area corresponds with the location of the E.C. Martin general store on the 1940 Stacy map (location 68 on Figure 33).

9LI311-N

Site loci 9L311-N is located 315 m east of Fort Stewart Road 40 and 30 m south of Fort Stewart Road 144 (Figures 32 and 39). This was the central core of Taylors Creek.

Artifacts recovered from this area included construction materials such as nails and window glass. Observed, but not collected, were several varieties of brick. Other artifacts included a brass bell fragment, turpentine pot fragments, as well as numerous bottle glass fragments and ceramics.

The only extant architectural feature remaining at Taylors Creek, the 1930s schoolhouse steps, are found in this area. Two pilings for the

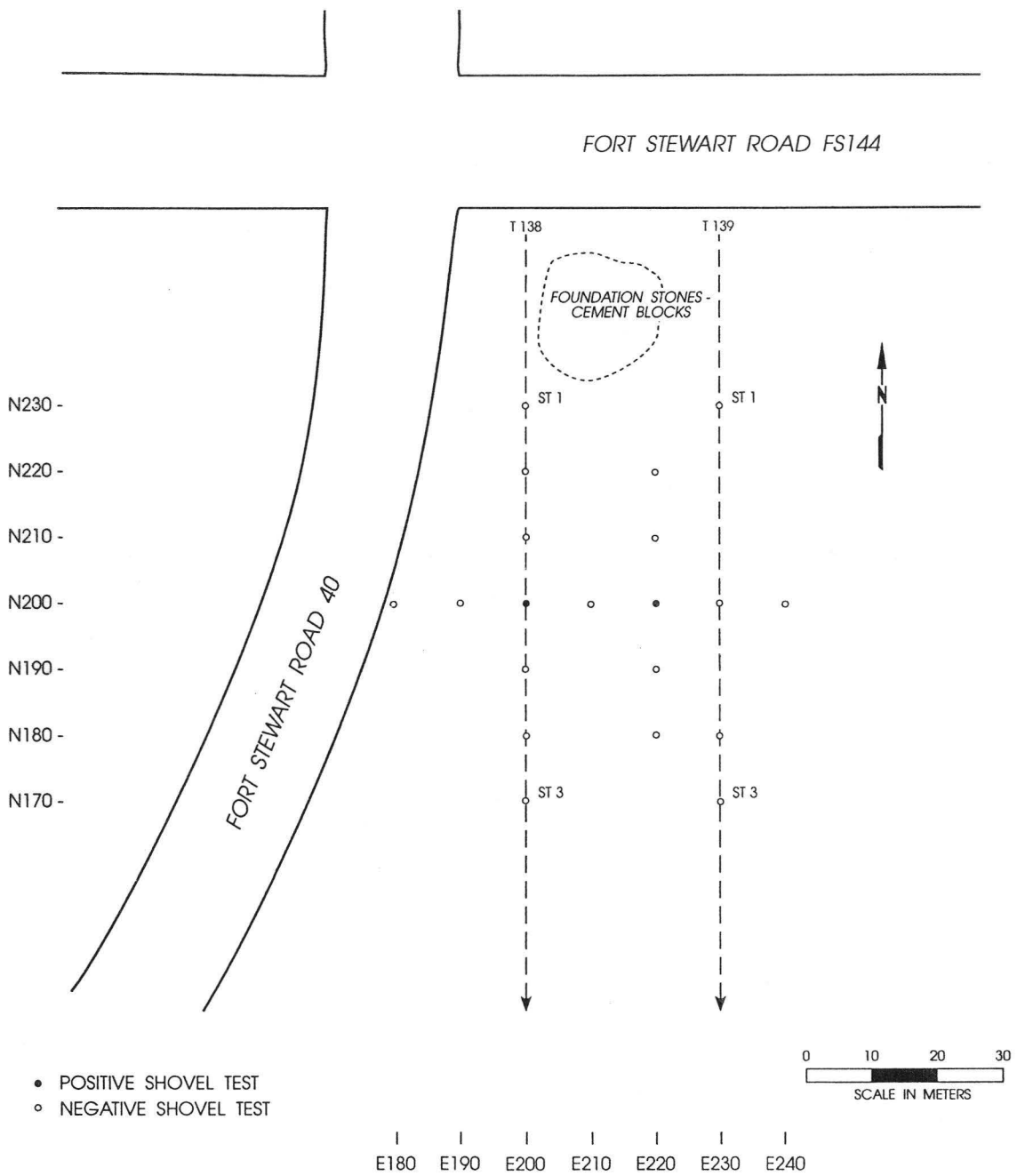


Figure 38. Locus J at 9LI311.

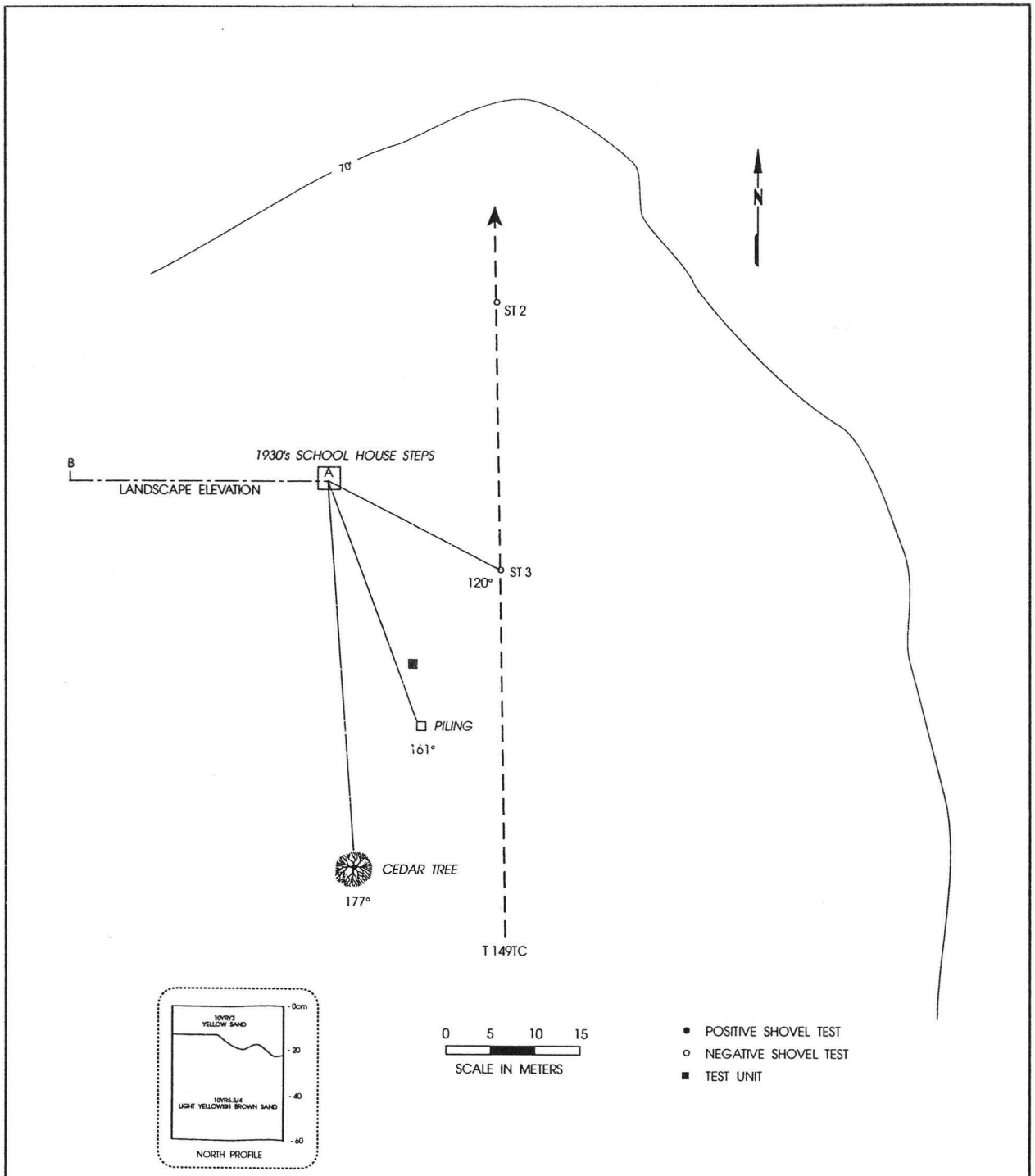


Figure 39. Locus N at 9LI311, showing the location of the schoolhouse steps and the test unit.

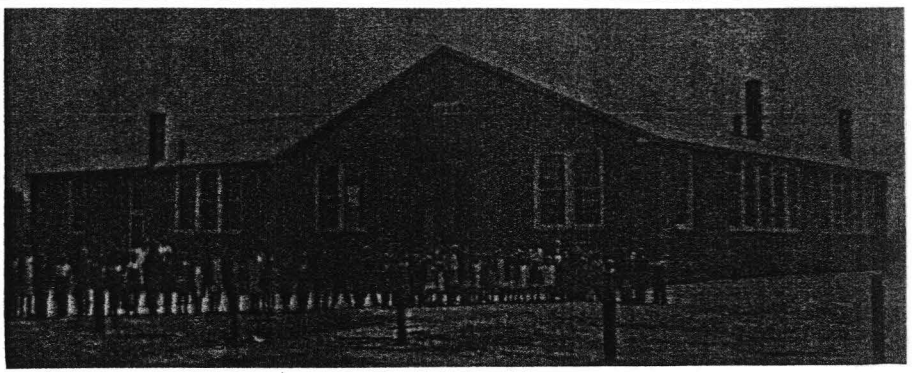


Figure 40. Photograph of the brick Taylors Creek school (from Yarbrough and Yarbrough 1986)

structure, as well as a thin scatter of broken brick east of the steps, confirm oral and historic accounts concerning the construction materials used in the school (Figure 40). Oral history accounts also relate that behind the school was the school kitchen and football field.

Artifacts, especially occasional fragments of brick, were recovered from this area as far as 270 m south of Hencart Road, an area which would have included the football field. This dispersion of material confirms that this area of Taylors Creek was extremely disturbed, likely from a combination of the original demolition and from subsequent military operations.

Evaluation of Taylors Creek

The historic overview of Taylors Creek suggests that the site could address a broad range of diachronic questions concerning the formation and function of small coastal plain communities. The study of dispersed communities bound by special needs and family ties have rarely been explored archaeologically and their study would certainly be appropriate.

The collection from the various loci is also impressive, representing a broad range of artifact groups. The previous examination of the site's artifact pattern reveals additional questions concerning the site and the nature of rural communities. The ceramics recovered from Taylors Creek reveal a mean ceramic date of about 1855. The mean historic date for the town (estimated to have begun about 1800 and ceased functioning in 1940) is 1870. The earlier mean ceramic date is

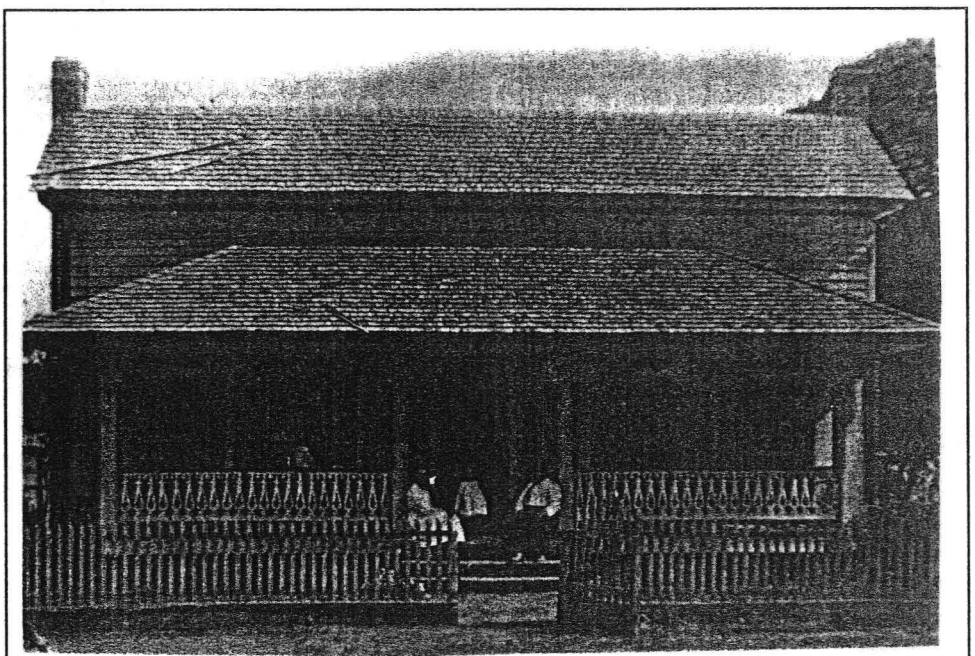


Figure 41. Example of a wood frame house set on brick piers at Taylors Creek (from Yarbrough and Yarbrough 1986).

perhaps the result of the modern town incorporating some dispersed portions of the original settlement, which is situated outside the survey tract, about 0.5 km to the northeast.

Other data sets from the town, however, are less impressive. For example, there is dearth of artifacts from subsurface contexts. As Figure 32 reveals, the vast majority of the 30 m transect tests were negative.

Intact architectural features are even more rare. Only the steps and two piers to the modern school at Taylors Creek have survived intact. While the locations of other sites are marked by brick, these remains are scattered and lack integrity, appearing to have suffered from considerable displacement. Even the school steps reveal that an (unsuccessful) effort was made to dislodge them. In spite of the extensive transect lines crossing the town, the only features identified are three modern privies.

This suggests that the military did a very effective job at removing evidence of Taylors Creek. This, however, was likely easy. All of the houses illustrated by Yarbrough and Yarbrough (1986; see Figure 41 for an example) were built on brick piles. Based on archaeology at nineteenth century coastal plain sites, it is likely that the foundations were shallowly set. Even the chimney stacks were probably not deeply placed. Such structures could be easily removed. The relative absence of brick from the all-brick schoolhouse (9LI311-N) documents that brick was either salvaged by the former residents of Taylors Creek or by the military. Regardless, it is likely that the footprints of most Taylors Creek structures were completely removed.

Coupled with this is the relentless and exceptional use of the Taylors Creek area by tracked vehicles at Fort Stewart which has resulted in extensive topographic and landscape alterations. Figure 19 clearly reveals the disturbance resulting from a single tracked vehicle making a single sharp turn-around in the loose, unconsolidated sands which characterize the town. This event was found to create rutting to a depth of 30 cm. Excavation of shovel tests and the 50 cm test units provided additional documentation of this disturbance. In one case a cigarette filter was found at a depth of 40-50 cm, while in another plastic debris were found to a depth of 65 cm.

As a further evaluation of the disturbance which has affected Taylors Creek, a level line was run for 25 m from the schoolhouse steps (Figures 39 and 42). These steps were selected since they appear to still in their original location and the bottom step likely documents the ca. 1940 ground level in the vicinity of the school. The resulting profile dramatically reveals the deflation of soils in the town's core, as well soil movement which has resulted in artificial mounding.

Taken together, the data from shovel tests, test units, visual observation, and topographic evaluation strongly suggest that the integrity of Taylors Creek has been extensively compromised. This is not to say that intact portions of Taylors Creek do not exist — they may. However, this survey has failed to identify broad areas of integrity. It is unlikely that the site, in its current condition, could successively address the broad research interests previously outlined.

Consequently, we recommend 9LI311 as not eligible for inclusion on the National Register of Historic Places.

We must also recognize that at least some aspects of Taylors Creek can be accessed through either documentary or oral history sources. This may, simply put, be a situation where historical research may be better able to address a broad range of questions than can archaeological study, *given the condition of the resources.* If oral history is to be a viable option, however, it must be undertaken quickly. We recommend a concerted effort to locate former residents, to identify artifacts which can be documented as coming from the town, and to collect documents (such as photographs, written accounts, and business papers) which are associated with the town.

9LI362

This site was originally numbered 9LI(FS)57 by the base's Consulting Archaeologist,

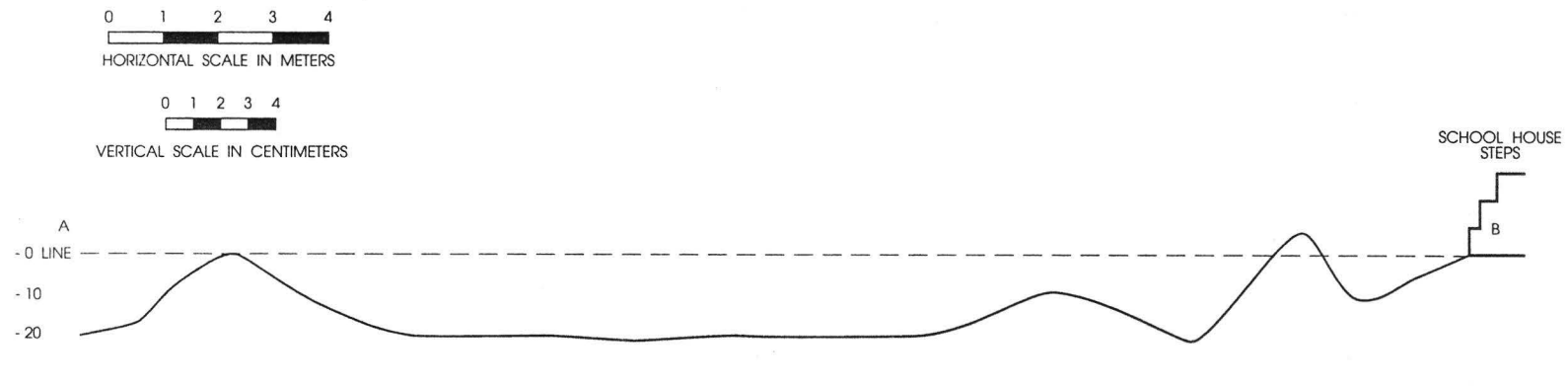


Figure 42. Topographic impacts at 9LI311 in the vicinity of the schoolhouse steps.

but was renumbered 9LI362 after the completion of our survey. The site was reported to be located in and adjacent to the overflow area for the emergency spillway of Fort Stewart Pond 4 east of Fort Stewart Road 40 and north of the community of Taylors Creek. The central UTM coordinates are reported as N3533510 E439870. The site is situated on a drainage side slope and the nearest source of water would have been the Canoochee Creek drainage from which Fort Stewart Pond 4 was constructed. Site elevation is 18 m AMSL (Figures 23 and 43).

The site was originally identified by Fort Stewart Base archaeologist David McKivergan on December 6, 1995. He reported collecting five Deptford plain sherds, one Deptford indeterminant stamped sherd, five Savannah Complicated Stamped sherds, six Savannah plain sherds, one Savannah indeterminant stamped sherd, six Coastal Plain chert flakes, and one whiteware ceramic. This would suggest at least three components — Middle Woodland, Early Mississippian, and historic.

It was recommended that the site be further tested before it was evaluated for its eligibility for the National Register.

The artifacts collected by McKivergan were passed on to Chicora Foundation during our field survey. While not required by the scope, we agreed to curate the collection with materials which we might obtain from the site. As these materials were examined and re-evaluated prior to the survey, it was found they included a much broader temporal range than anticipated.

McKivergan's collection included one diagnostic lithic, a Coastal Plain chert end scraper. The scraper is 28.76 mm in overall length, 27.49 mm in width, and 8.52 mm in thickness. Its angle is 57.5° and weight is 8.00 g. Other lithic materials included 31 flakes.

The pottery in McKivergan's collection included 11 large (i.e., over 2.5 cm in diameter) sherds and 19 small sherds. The large sherds included eight Swift Creek Complicated Stamped, and three probable Irene Complicated Stamped sherds. The one whiteware ceramic reported by McKivergan was also present.

There are some notable differences between the analysis offered by McKivergan on the site form and that obtained during our study. Based on the collection we have, the site exhibits a Late Woodland to Late Mississippian temporal span.

Vegetation at the site consisted of partially cleared hardwoods, oak, hickory, holly and pine. This area was covered by T 13 to T 17 in the Taylors Creek survey. The surface, while exhibiting limited visibility (except immediately adjacent to the spillway, where the ground was denuded, providing excellent visibility), was also examined for any indication of the site.

To the south, east, and west of the site area are low, poorly drained, swampy woods. To the immediate north is the spillway, which measures about 100 m in width. Beyond the spillway, to the north, is a sandy rise, which has an elevation about 2 m higher than the surrounding swamp. This rise measures about 60 m in diameter and is situated outside the survey area. The rise, in the middle of the swamp, is reminiscent of the topography reported by Stoltman (1974:2) in the Groton Plantation locality along the Savannah River.

According to Fort Stewart Consulting Archaeologist David McKivergan, the spillway was constructed, using bulldozers, in the 1960s by the removal of a large bluff overlooking Canooche Creek. Large push piles, with trees up to about 15 cm in diameter growing in them, were observed along the southern boundary of the spillway during the Chicora 1995-1996 survey. These may reflect the remnants of the original spillway construction. The materials found by McKivergan possibly came from this spoil area and most likely represent material displaced by construction.

The initial investigations of this site, as documented by the base's Consulting Archaeologist, are somewhat confusing. According to the initial site form and conversations with McKivergan, the site was located 100 m from Fort

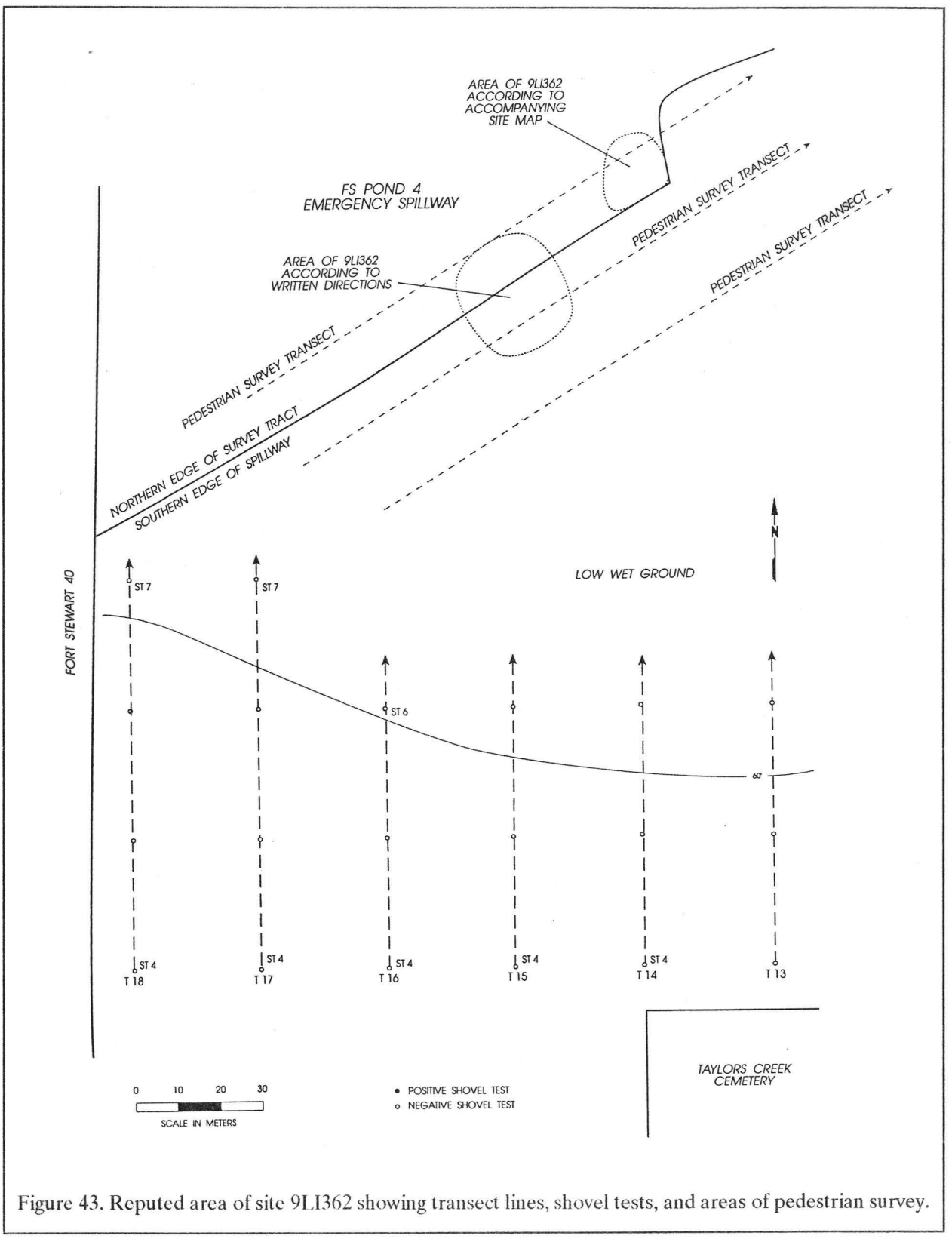


Figure 43. Reputed area of site 9LI362 showing transect lines, shovel tests, and areas of pedestrian survey.

Stewart Road 40 on the southern edge of the spillway. The site form sketch map shows the location as being near a bend in the spillway at its far eastern edge.

Our pedestrian survey discovered that the sketch map contains some inaccuracies, which is quite understandable for a brief reconnaissance study. The bend in the spillway at its eastern edge is about 170 m from Fort Stewart Road 40. There was also no indication on the site form of push piles or the low lying area due south of the spillway.

Consequently, our investigations, after the transect surveys failed to recover any evidence of the site, consisted of a pedestrian survey, focused on the area about 100 m from Fort Stewart Road 40, as well as on the eastern spillway bend area in the hopes of identifying the site's actual location. Since the area exhibited almost no vegetation, we hoped that surface materials similar to the initial discovery would be present. This work consisted of a series of pedestrian transects initially parallel to the spillway. When these were unsuccessful, the spillway itself, which was dry, was also walked. Eventually transects perpendicular to the spillway were also walked. No evidence of the site could be found in any of these pedestrian transects.

This study suggested that whatever materials were present had been collected during the initial study. In an effort to evaluate where the materials might have come from, the construction and nearby topographic features were evaluated. We believe that one potential location may be a wooded knoll to the north, outside of our survey tract. This area was also subjected to a pedestrian survey, although no shovel testing was conducted. No materials were identified, but surface visibility was limited.

No materials were encountered and the posited portion of the site within our survey boundaries has been heavily impacted by the spillway construction (maintenance of which appears to be on-going). These two factors are, of course, adequate to provide a recommendation that the site is not eligible for inclusion on the National Register. We are, however, reluctant to provide such a recommendation without additional survey north of the Taylors Creek tract, encompassing the sandy rise. This additional work seems especially important since the recovered materials are unusual and could help refine the cultural phases expected at Fort Stewart. In addition, from an administrative standpoint, it appears inappropriate to evaluate the eligibility of only a *portion* of a site.

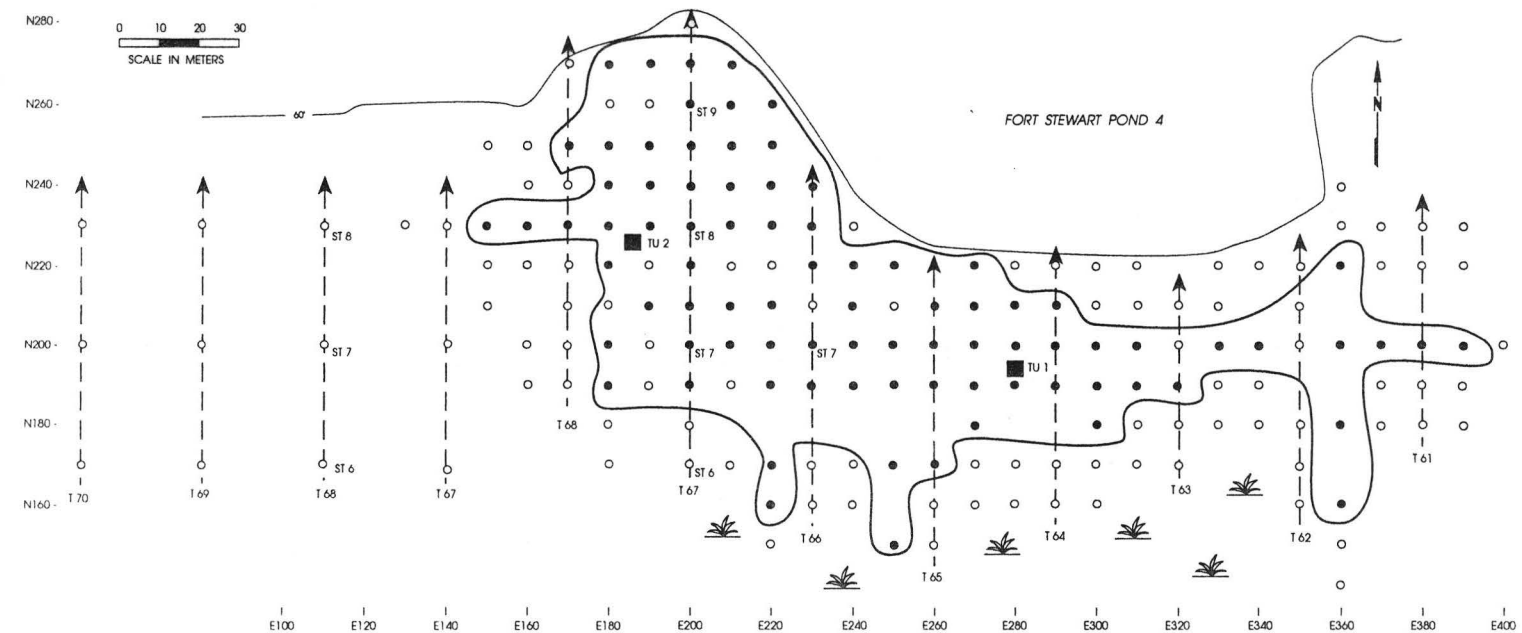
Consequently, we speculate that 9LI362 may exist as a recognizable entity to the north of the survey area, outside of our survey tract.. Additional survey should be conducted to confirm either its presence or that the entire site has been destroyed by the spillway construction.

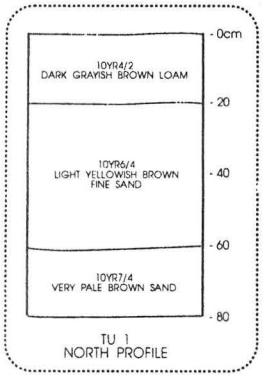
Newly Identified Sites

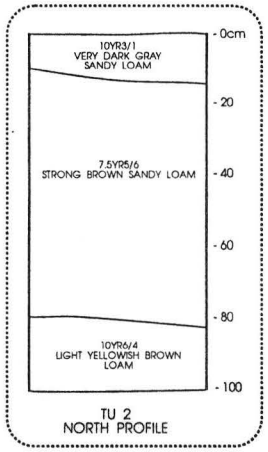
9LI357

Site 9LI357 is located 240 m north of Fort Stewart Road 144 and 1,440 m west of Fort Stewart Road 40. The central UTM coordinates are N3533561 E437127. Topography at the site consists of a slight rise above the immediate surrounding landscape. The closest source of water, the now flooded Canoochee Creek drainage, is located on the northernmost edge of the site. The drainage has been flooded to create Fort Stewart Pond 4. The site is at an elevation of 20 m AMSL and it is 10,200 m² in size (Figures 23 and 44).

Vegetation at the site consists of mixed pine and hardwoods. There is also an oak grove present running east-west which covers approximately 15,000 m². No surface artifacts were found or collected at this site. A total of 172 shovel tests were excavated in cardinal directions from the original positive shovel test. Shovel tests were initially originally excavated at 10 m intervals from the original positive test pit. Once the site exceeded 10,000 m² shovel tests were expanded to 20 m intervals (Figure 44). Of the 172 shovel tests excavated 82 yielded subsurface remains. Over 300 artifacts were recovered from this site. The only diagnostic lithic artifact recovered is the base of a probable Morrow Mountain projectile point which







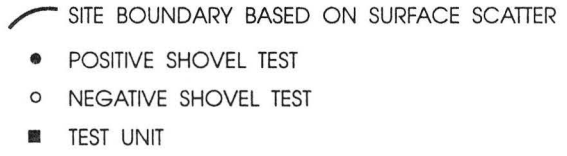


Figure 44. Map of 9LI357 and test unit profile.

has been heavily fire damaged. The only metric data recordable for the fragmentary point is the stem length, which is 16 mm.

While work at the site produced 94 Coastal Plain chert flakes and 97 small (i.e., under 2.5 cm in diameter) sherds, only 13 large sherds, suitable for analysis, were recovered. The collection is dominated by six sherds of what appear to be a Middle Woodland gritty paste plain pottery, resembling what has been called sandy-paste Wilmington or Ocmulgee wares. Others might prefer calling these specimens Deptford Cord Marked, although the paste did not include the quantities of quartz grit often found associated with Deptford wares, nor were their textures as coarse (see DePratter 1979:124). Regardless, this is a very small collection and detailed typological assessments are probably inappropriate. Also present is one sherd with a similar paste and a surface treatment which appears to be corn cob impressed. Two sherds with similar paste were also present with cord marked surface treatments. One sherd of Savannah Check Stamped pottery and one sherd of Refuge/Deptford Simple Stamped pottery are present in the collections. Also present are two sherds with a fine sand paste, one of which is plain and the other has fine cord marking. These do not immediately correspond to any recognized type for this area.

In order to perhaps better understand the assemblage the small sherds were also briefly examined. The majority are quite small and offer no additional information concerning the temporal episodes represented at the site or the typologies which might be present. Within the collection, however, were an additional 11 sherds which appear to be sandy paste Wilmington or Ocmulgee wares, as well as one Deptford Check Stamped sherd. Four examples of Stallings or St. Simons Plain, recovered from Level 8 of Test Unit 2 (discussed below), are also present in the assemblage.

Other items from the prehistoric collection include one used chert flake, 16 fragments of possible daub and three animal bones (two of which are burned).

The collection also produced a small quantity of historic remains, including one undecorated pearlware, one annular pearlware, one lead glazed slipware, three undecorated whiteware ceramics, two fragments of black bottle glass, one kaolin pipe bowl fragment, one unidentifiable nail, a honey-colored reworked gunflint, three fragments of unidentifiable metal, and 60 small (generally under 1 cm in diameter) fragments of brick. These materials are widely dispersed over the site and likely reflect a heavily scattered early nineteenth century occupation associated with the adjacent town of Taylors Creek.

Although not required by the scope, two 50 cm test units were excavated at this site to depths of 100 cm. Test unit 1 was excavated east of the original positive test pit in a location where large amounts of daub were located (Figure 44). Test unit 2 was excavated northwest of the original positive test pit in a location where the greatest amount of lithic debitage and sherds was located (Figure 44).

The soil profile of test unit 1 consisted of 20 cm of dark grayish brown (10YR4/2) sandy loam overlying 40 cm of light yellowish brown (10YR6/4) fine grained sand over 20 cm of very pale brown (10YR7/4) fine grained sand.

The soil profile of test unit 2 consisted of 12 cm of very dark gray (10YR3/1) sandy loam, overlying 68 cm of a strong brown (7.5YR5/6) sandy loam, over 20 cm of light yellowish brown (10YR6/4) silty loam. At 100 cm a reddish yellow (7.5YR6/8) clay was encountered. The soils at this site are classified as Fuquay loamy sands.

The artifacts recovered from site 9LI357 suggest a Woodland and Mississippian occupation. The substantial size of the site, 10,200 m² would indicate a possibly a semi-permanent, permanent, or seasonal hunting and gathering site. The site is in very good condition, with the threat of erosion limited by the placid nature of Fort Stewart Pond 4 (which, classified as a recreational area, is off limits to tactical training). There is very little evidence of concentrated military impact at this time. The extensive amount of remains recovered from this site, including daub, increase the chances

of sub-surface features being present. It is possible that this site may be able to address significant research questions concerning the lifeways of prehistoric peoples. Therefore, 9LI357 is recommended as potentially eligible for inclusion on the National Register of Historic Places.

We recommend that additional investigations be conducted at this site in order to determine eligibility. This work should consist of dispersed test units to better identify the site core and attempt to identify subsurface features. We believe that 50 cm units are too small to provide the information necessary and recommend that 1 m units be used instead.

9LI358

Site 9LI358 is located 1,710 m west of Fort Stewart Road 44 and 180 m north of Fort Stewart Road 144. The central UTM coordinates are N3533480 and E436961. Topography at the site consists of a slight rise above the immediate surrounding landscape. The closest source of water, the now flooded Canoochee Creek drainage, is located on the northernmost edge of the site. The drainage has been flooded to create Fort Stewart Pond 4. The site is at an elevation of 19 m AMSL and it is 1,611 m² in size (Figures 23 and 45).

Vegetation at the site consists of mixed pine and hardwoods. No surface artifacts were found or collected at this site. A total of 49 shovel tests were excavated, at 10 m intervals, in cardinal directions from the original positive shovel test (Figure 45). Of the 49 shovel test units excavated, 13 yielded subsurface remains.

The soil profile from the 50 cm test unit revealed 10 cm of dark yellowish brown (10YR4/4) sandy loam overlying a yellowish brown (10YR5/8) sandy loam, over a yellowish brown (10YR5/8) clayey loam, with a reddish yellow (7.5YR7/8) clay encountered at 60 cm (Figure 45). The soils at this site are classified as Fuquay loamy sand.

Only one diagnostic lithic artifact was recovered from site 9LI358 — an example of what is often called simply a "small triangular point" (see, for example Conner and Hally 1979:225-226, Plate XIIa-c). This point measures 19.13 mm in length (the tip is broken, so its overall length is estimated at 22 mm), 20.81 mm in length, and 5.17 in thickness. The sides are slightly incurvate while the base is concave. This point appears to be slightly wider and thicker than those described by Conner and Hally (1979), but otherwise match the description. Such points are typically associated with Early Mississippian assemblages (see also Coe 1964:49 where similar small triangular points characterize the Late Woodland and Early Mississippian, being called Pee Dee Triangular and Caraway triangular).

The recovered pottery includes only one sherd over 2.5 cm in diameter, what might be called a sandy paste Wilmington sherd with heavy cord marking. In addition, 12 small sherds, all plain, were recovered. While unidentifiable, their paste and rough surface treatment is more suggestive of Woodland materials than Mississippian. 9LI358 likely functioned as a limited activity site, perhaps associated with extractive activities taking place on the edge of the Canoochee Creek swamp.

Also present in the recovered materials are small quantities of historic remains, including one fragment of amber glass, one fragment of aqua glass, one fragment of clear glass, three machine cut nails, and three wire nails. Also observed, but not collected, were three unidentifiable nail fragments and two concrete fragments. All of these materials are likely smear from the adjacent site 9LI311, Taylors Creek.

While much of the site appears in reasonably good condition, there is evidence of erosion along the northern slope to Fort Stewart Pond 4, where clays are frequently found exposed on the surface.

The materials recovered from the site are both sparse and also highly fragmented, most commonly associated with the upper Ap horizon. While this site has contributed site distribution data, tentatively linking settlement with the swamp edge, the data sets present are not likely capable of addressing more sophisticated temporal,

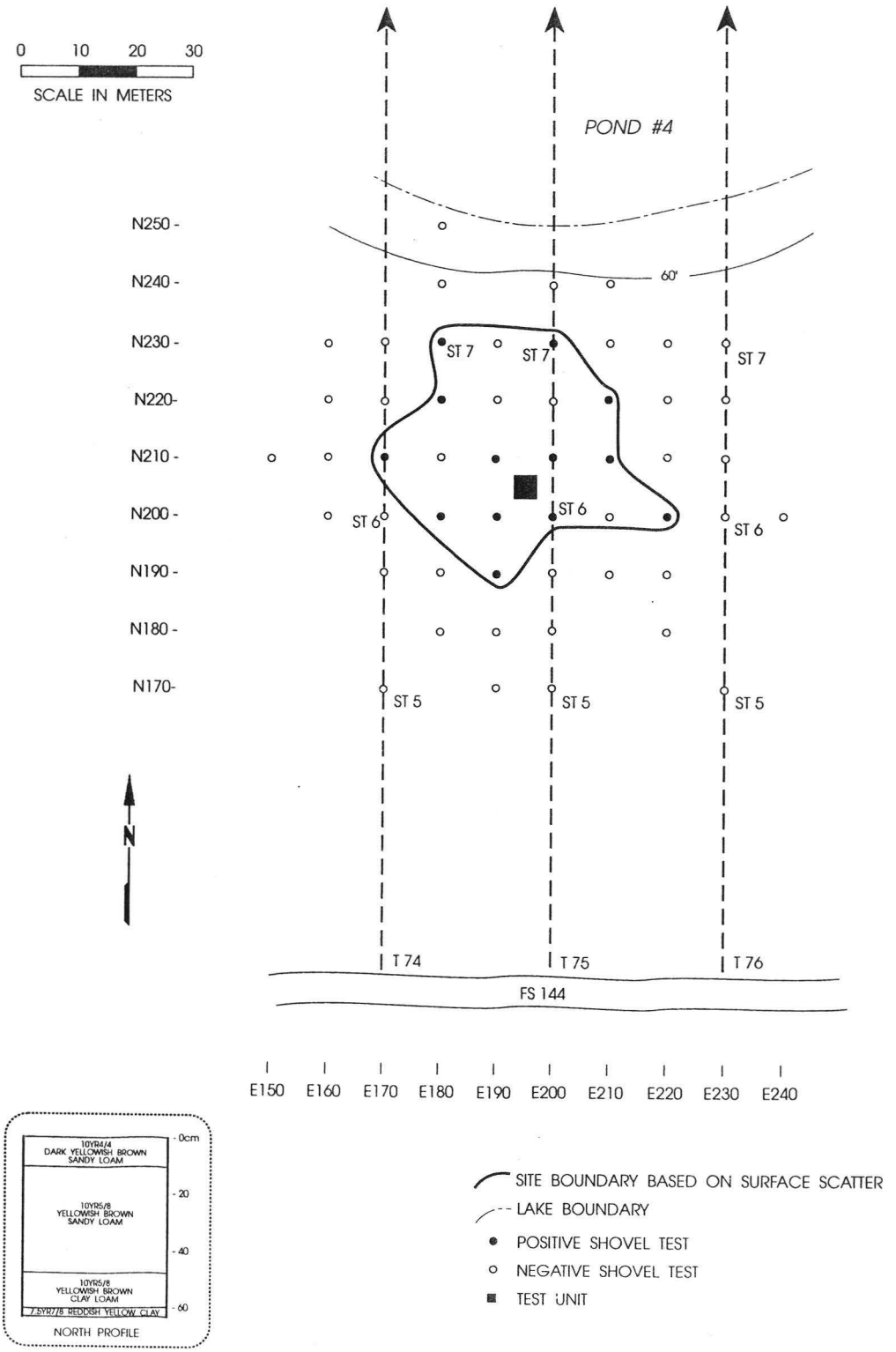


Figure 45. Map of 9LI358 and test unit profile.

settlement, or dietary questions. Consequently, site 9LI358 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LI359

Site 9LI359 is located 1,830 m west of Fort Stewart Road 40 and 180 m north of Fort Stewart Road 144. The central UTM coordinates are N3533438 and E436791. Topography at the site consists of a slight rise above the immediate surrounding landscape. The closest source of water, the now flooded Canoochee Creek drainage, is located on the northernmost edge of the site. The drainage has been flooded to create Fort Stewart Pond 4. The site is at an elevation of 19 m and it is 1,378 m^2 in size (Figures 23 and 46).

Vegetation at the site consists of mixed pine and hardwoods. No surface artifacts were found or collected at this site. A total of 39 shovel tests were excavated, at 10 m intervals, in cardinal directions from the original positive shovel test (Figure 46). Of the 39 shovel test units excavated 10 yielded subsurface remains.

The soil profile of the 50 cm test unit consists of 10 cm of dark brown (10YR3/3) humus overlying a brown (7.5YR4/4) sandy loam and yellowish brown (10YR5/8) sandy loam, overlying a brownish yellow (10YR6/6) sandy loam. This overlies about 20 cm of yellowish brown (10YR5/6) sandy loam to a depth of 55 cm. A brownish yellow (10YR6/6) fine sand is found to 70 cm and a yellowish brown (10YR5/8) brown sandy clay extends to a depth of 85 cm. These soils appear to be highly disturbed with shrapnel evident as deep as 40 cm below surface. This provides clear evidence that the area was impacted by short rounds from overflights of artillery firing into nearby target areas. The soils at this site are classified as Fuquay loamy sand.

No diagnostic artifacts were recovered from site 9LI359. However, much of this material is similar in nature to that of site 9LI357. Recovered are 12 Coastal Plain chert flakes and five small sherds. All five of the sherds are plain, although their paste is gritty and the surface treatment is suggestive of a Middle, perhaps Late, Woodland time period.

Like 9LI358, this site was likely associated with the swamp margin and represents a hunting or extractive camp located to take advantage of wetland resources. It exhibits similar site conditions, with evidence of erosion along the edge of the pond. Site 9LI359, however, also exhibits much heavier (or at least more obvious) military impact.

The small quantities of materials present, coupled with the impoverished assemblage and absence of subsurface remains, suggests that this site is unlikely to contain the data sets essential to address the range of Middle and Late Woodland research questions proposed for the Fort Stewart area. Consequently, this site is recommended as not eligible for inclusion on the National Register of Historic Places and no further investigations are recommended.

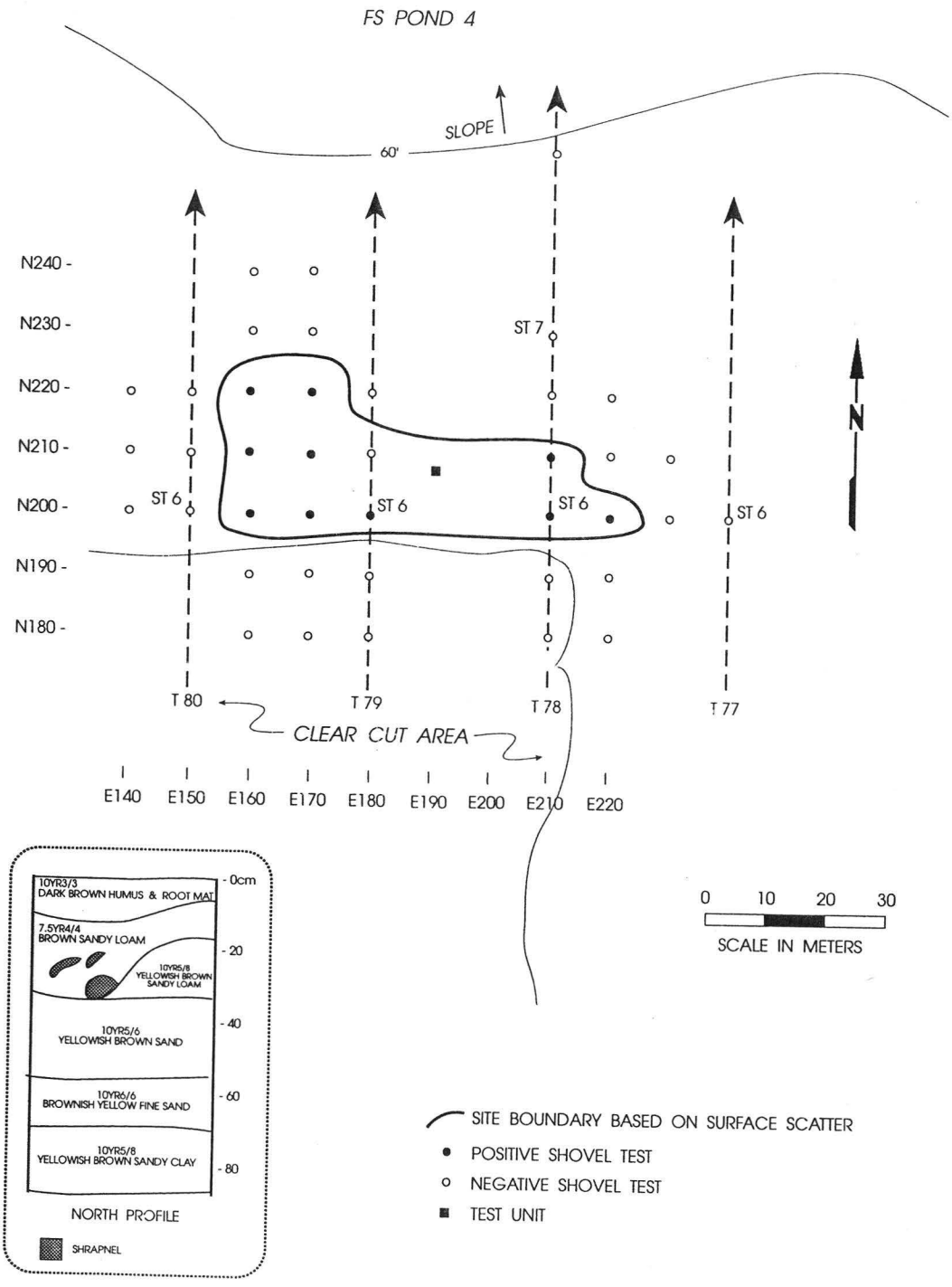


Figure 46. Map of 9LI359 and test unit profile.

CONCLUSIONS

Introduction

As a result of the intensive survey of the approximately 522 ha JAECK Drop Zone area and the approximately 241 ha Taylors Creek area at Fort Stewart, 11 archaeological sites and 12 isolated occurrences were revisited or identified. Of these resources (which are briefly outlined in Table 3), none are recommended as eligible for inclusion on the National Register of Historic Places, although two are recommended as potentially eligible. One of the potentially eligible sites — 9LI357 — is situated in the Taylors Creek survey area. One — 9LG47 — is situated just outside the JAECK Drop Zone. The remaining sites and isolated occurrences are all recommended as not eligible for inclusion on the National Register, except for 9LI362, which could not be found and is therefore not assessed by this study.

The JAECK Drop Zone yielded a site density of 0.76 sites per km² and Taylors Creek area yielded a site density of 2.5 sites very km², if only the archaeological sites are taken into account and occurrence are excluded. The site density at the JAECK Drop Zone is slightly less than that projected by Miller et al. (in Thomas et al. 1995) of 1.1 sites per km². The density from the Taylors Creek area is particularly important since it suggests that this area of the Coastal Plain can, in certain settings, exhibit site densities far in excess of those currently projected. It is, nonetheless, considerably lower than that projected for Fort Bragg in North Carolina, where site densities of between 10 and 22 sites per km² have been identified (Trinkley et al. 1995:135).

Issues discussed in these conclusions include an overview of the potentially eligible sites, recommendations for further study to determine eligibility, and recommendations for their protection. Also included is an overview of current predictive modeling which includes an examination of locational data; an exploration of the methodology being used for site discovery, which includes discussion of the effectiveness of shovel testing and the identification of sites which may be deeply buried; the examination of site function/duration based on artifact content; and an overview of what has been learned concerning the cultural phases present in the study area.

Overview of Potentially Eligible Sites

Three sites are recommended as potentially eligible for inclusion on the National Register of Historic Places — 9LG47, 9LI357, and 9LI362.

9LG47

This is a small historic site identified just off the JAECK Drop Zone survey tract, probably representing a house site dating from the late nineteenth century. The site exhibited a possible buried midden, a brick rubble pile, and a range of artifacts. There are a broad range of questions concerning the late nineteenth century historic occupation of Fort Stewart which have yet to be addressed through archaeological research (see, for example, Jackson et al. 1988:25-29; Thomas et al. 1995:177-181).

Situated primarily off the survey tract, this site was recorded, but could not be thoroughly assessed. Consequently, at present it is not possible to determine whether this site has the potential to address the broad range of research questions which might be addressed by late nineteenth century historic farmsteads in the project area. Given this uncertainty, the only prudent approach is to assume that the site is potentially eligible until a thorough survey determines otherwise.

9LI357

Site 9LI357 is a large prehistoric site

evidencing primarily Middle Woodland (sandy paste Wilmington or Ocmulgee) components, although Middle Archaic (probable Morrow Mountain), Late Archaic (Stallings/St. Simons), Early Woodland (Refuge/Deptford), and Early Mississippian (Savannah) components were also recovered. Consequently, the site spans perhaps 5500 years of prehistory.

Shovel testing at the site failed to reveal features (which is not particularly surprising), but did reveal small quantities of charcoal and burned bone, as well as possible daub. Of the 172 shovel tests excavated, nearly 48% were positive. These tests allowed the site boundary to be established, provided a detailed look at the range of temporal periods present, and suggested that at least some portions of the site may exhibit stratigraphic deposits as deep as 70 cm. Taken together these findings suggested that the site may be eligible for inclusion on the National Register of Historic Places.

The presence of possible deep deposits, coupled with the range of temporal periods present suggests that the site may be able to address the refinement of cultural phases specific to the base area. The presence of charcoal and burned bone suggest that subsistence data may be present. The presence of lithic material and daub suggest that the site represents more than a single occupation episode, and perhaps represents a base camp reused over a long period of time.

The testing, however, did not completely answer questions concerning the impact plowing or military activities may have had on the site. A very large percentage of the recovered pottery is under 2.5 cm in diameter — characteristic of highly plowed contexts. In spite of this, small quantities of larger material were present. Additional, larger, tests are necessary to more accurately evaluate site conditions.

This additional, phase II testing using 1 m dispersed tests would also assist in more clearly delineating concentrations of material in the site and, hopefully, identifying horizontal stratigraphy.

Finally, the excavation of perhaps a dozen 2-meter units would allow a larger collection to be gathered. This would better allow assessment of site density, the potential for feature recovery, and the range of materials present at the site.

9LI362

This site was initially reported to us as being recorded as 9LI(FS)57 and the site number was changed after the completion of our study. The site is situated at the northern edge of the Taylors Creek survey tract and it has been impacted by the construction of an emergency spillway for Fort Stewart Pond 4. Although materials have been recovered from spillway spoil in the past, it is possible that the site is actually situated to the north, outside the survey tract, on a small sandy knoll or rise surrounded by swamp.

Although this site has been impacted by military activities, it has produced small quantities of Swift Creek pottery, which has not been previously reported for the project area. The presence of this material is sufficient to afford the site considerable research potential.

This site could not be relocated on the survey tract, although it is possible that it extends out of the survey area, into a wooded knoll north the project. Consequently, this site is not assessed by the current study and we recommend that additional survey to the north be undertaken in an effort to locate the source of the material initially recovered by the base's Consulting Archaeologist.

Site Management Prior to Additional Survey or Testing

These three sites, as potentially eligible for inclusion on the National Register, should be avoided by all ground disturbing activities until additional survey or testing can be accomplished.

Site 9LG47 appears to be situated in an area of active training exercises. This area should be posted as off limits to all troop activity. It should also be avoided by silvacultural and agricultural activities.

Site 9LI357 is situated within the

recreation area associated with Fort Stewart Pond 4 and is probably not threatened by tactical training. Nevertheless, this area should be placed off-limits until the necessary testing can be accomplished.

Site 9LI362 is at the edge of the Fort Stewart Pond 4 emergency spillway and has been damaged by work associated with that spillway. Maintenance activities should be limited to those necessary for the protection of life and property until the site assessment is complete. No activities should be allowed on the sandy rise to the north of the spillway (since this presents the best area for possible remains) until additional survey has been conducted.

The Current Predictive Model and Land Use

As was briefly discussed in the **Prehistoric and Historic Overview** section, Fort Stewart has a predictive model developed by a rather limited survey, but "rigorous statistical manipulation of the survey results in relation to soil zones" (Thomas et al. 1995:229). The result was a series of 1:50,000 scale map which have "disappeared" (Thomas et al. 1995:238). Consequently, "the greatest problem with the model is that it cannot be duplicated" (Thomas et al. 91995:238).

Regardless, a reconstruction of this model by Thomas et al. (1995:241-242) led to the predictive maps (Figures 47 and 48) of the JAECK and Taylors Creek areas. The original predictive model, which apparently used soils, stream rank, and perhaps other factors, has been reduced essentially to a reliance on soil drainage (Thomas et al. 242-243).

This becomes clear when Figures 7 and 8, which show the soils of the two tracts, are compared to the probability maps (Figures 47 and 48). Soils of Fuquay, Stilson, Dothan, and Albany are classified by the current predictive model as having a high probability of archaeological remains (Figure 47 and 48; see also Thomas et al. 1995:243). This is in spite of the fact that the Albany Series soils are classified as somewhat poorly drained and occurring on nearly level areas (Looper 1982:19). The current model includes several moderately well drained soils such as the Blanton Series and the Echaw-Centenary Series (Looper 1989:21, 24) in the category of "indeterminate".

The eight prehistoric sites are found on either Blanton (n=3) or Fuquay (n=5) soils. The three historic sites are found on Blanton (n=1), Fuquay (n=1) and Blanton-Stilson (n=1) soils. Clearly there is a strong association, at least in this study, between archaeological site locations and soils. Moreover, at least some of the moderately well drained soils, such as Blanton, might better be considered as high probably locations (at least when they are in close proximity to drainages, as discussed below).

Our study, however, may do more to demonstrate that site probabilities are best based on a broad range of factors than to confirm the current predictive model. When the location of the prehistoric sites is examined (Figures 22 and 23) there is an equally strong correlation between site location and topography.

All of the prehistoric sites in the Taylors Creek tract are situated along the swamp margin. None of the sites are found further "inland" than about 300 meters, regardless of the soil or how well drained it might be. Consequently, the interior Stilson and Blanton soils are virtually unoccupied.

Turning to the JAECK Drop Zone survey area, the three prehistoric sites are found on side slopes overlooking small drainages. They are on well drained soils immediately adjacent to poorly drained bottomland soils. Again, broad expanses of more interior well drained soils were ignored in favor of the proximity to water and bottomland drainages. Further, not all of the available, seemingly appropriate, topographic settings were utilized. Of the eight possible drainages on the survey tract, only two were used by Native American groups. This suggests there are additional, as yet unclear, factors affecting site locations.

The location of historic sites is not much more clear. The community of Taylors Creek, in the Taylors Creek survey tract, was situated on

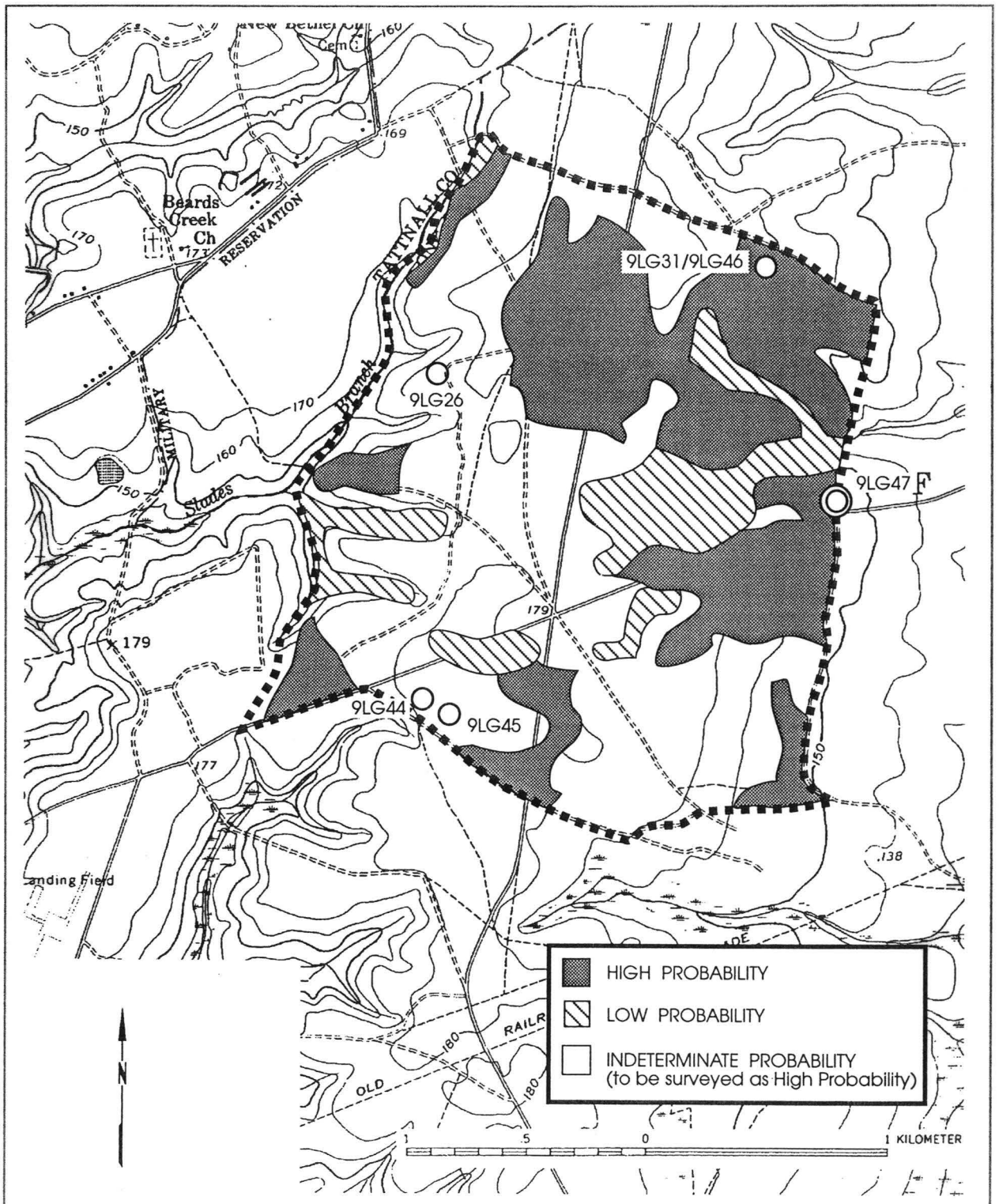


Figure 47. Site probability map for the JAECK Drop Zone developed by Thomas et al. (1995) with identified site shown.

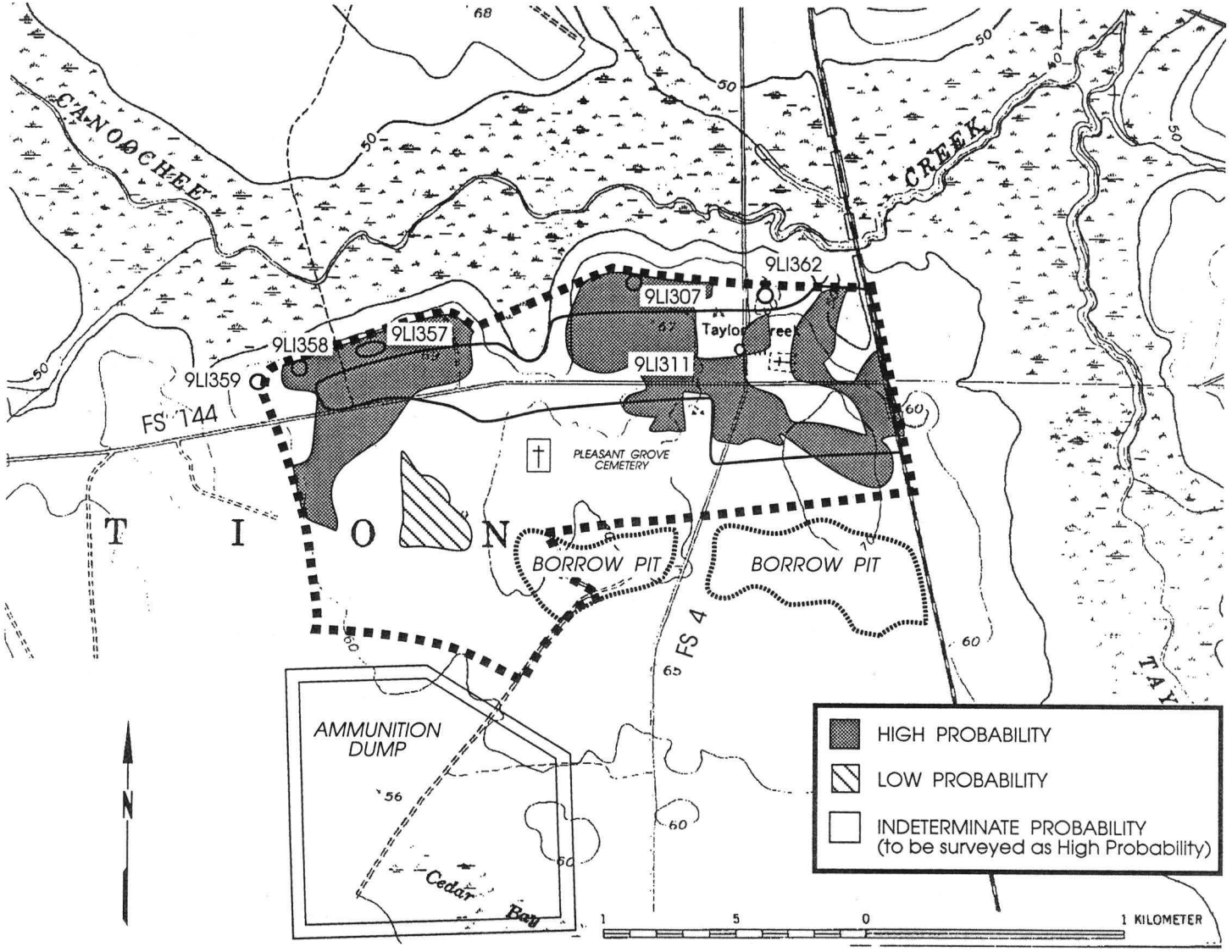


Figure 48. Site probability map for the Taylors Creek area developed by Thomas et al. (1995) with identified site shown.

what is an island of well drained soils surrounded by swamp and poorly drained soils. This location, of course, was not only a limiting factor in the communities history, but was also the source of much tragedy as portions of the town periodically flooded. Nevertheless, the community appears to have selected relatively well drained soils in close proximity to a major drainage. On the JAECK Drop Zone the two historic sites are individual house sites — examples of dispersed settlements. Both are located from 250 to 350 m from a creek. One is situated on well drained soils while the other is found on somewhat poorly drained soils. Although the sample is small, these data suggest that late nineteenth and early twentieth century historic locations are more dependent on commercial, industrial, and agricultural needs than on soils, water, or topography.

This review is not intended to belittle or criticize the current Fort Stewart predictive model. For one thing, the data from these studies is not adequate to support revisions. Rather, this discussion is designed to suggest that, first, the site density may be expected to vary tremendously on the base, depending on the setting and, second, the factors affecting site locations can be expected to be considerably more complex than the current model suggests.

Effectiveness of Current Methodology

There are three methodological issues involved in this particular topic. The first is whether conventional shovel testing is an effective tool for the recovery of archaeological sites in the Fort Stewart setting. The second is whether conventional shovel testing is an appropriate tool for the identification and evaluation of historic communities, such as Taylors Creek. The third is whether the collection of GPS data is cost-effective.

Effectiveness of Shovel Testing

There can be little doubt that shovel testing is the only effective tool for identifying archaeological sites in settings such as Fort Stewart. Even with the use of frequent burns as a forest management tool and the associated disturbance caused by the use of the base, ground visibility in the survey tracts was limited. Only one of the newly recorded sites, 9LG47, would likely have been identified as a result of a pedestrian survey. The others, including the large and potentially significant site at 9LI357, would have been missed. While one can debate the cost-effectiveness of shovel testing to locate sites such as 9LG45 or 9LI358, without these sites our understanding of settlement would be seriously flawed. Consequently, in this context shovel testing was both essential and successful.

Greater concern, however, can be expressed concerning the cost-effectiveness of shovel testing to identify deeply buried sites. Going into the JAECK Drop Zone survey, we were aware that some the soils exhibited deep, and at times buried, A horizons. Shovel testing was consequently rigorous and tests typically exceeded 55 cm in depth, often going as deep as 70 cm. This dramatically slowed the progress of the survey, increasing the anticipated survey length by at least 30%.

In spite of this intensive testing, no buried sites were encountered. In fact, of the approximately 3,000 shovel tests only four (0.1%) yielded materials deeper than about 30 cm. In all four of these cases the materials were small flakes and were isolated finds. No deeply buried sites were found. We did discover that the soils in the JAECK Drop Zone exhibit a somewhat regularly undulating stratigraphy representing a series of what appear to be dune ridges. Regardless, these areas were apparently not attractive to prehistoric occupants and sites, as previously discussed, were found only near drainages.

While we are sympathetic to the desire to expand our understanding (and recovery) of deeply buried sites, this is a very time consuming (and hence costly) way of achieving that goal. We believe a more appropriate approach is to build on the current study.

Specifically, we recommend that future surveys on Fort Stewart, in similar soil and topographic settings as the JAECK Drop Zone, anticipate a 10% sample of shovel tests in interior

areas exhibiting deep soils be excavated to the B horizon. In contrast, 100% of the shovel tests on transects within 200 m of drainages should be excavated to the base of the A horizon.

This approach ensures that the interior soils, at least for the immediate future, continue to be explored. But it also concentrates survey efforts on those areas where the potential for site recovery seems, at present, to be highest. This is an effective use of resources and ensures that surveys can be accomplished in a cost-effective manner.

Shovel Testing at Historic Communities

Another concern involved the use of shovel testing to explore the relatively modern component of the Taylors Creek community. As seen in the historic overview, Taylors Creek was economically and socially important to both the local and regional communities. Agricultural production provided the raw materials for local industry. Convenient transportation systems were available for the shipment of these products to other areas of the state and country. There is, historically, a great deal of data that may be acquired from the extant sources.

Even though Yarbrough and Yarbrough (1987) have written extensively about the Taylors Creek community, there is still an exceptional amount of information that may be obtained from oral history interviews of its former residents. Unfortunately, no in-depth studies, similar to those conducted the historic town sites of Dunbarton and Meyers Mill within the Savannah River Site in South Carolina (Browder et al. 1993), have been done at Fort Stewart. Such ethnographic or oral history surveys allow glimpses of the community, such as ethnicity, which are not always visible from archaeological data recovered during shovel testing. An excellent example of why such oral history studies need to be conducted at Taylors Creek is provided by the presence of African Americans in the community, whose existence is barely touched on by local histories. The change in the name of the Pleasant Grove Cemetery to the Philadelphia Cemetery is but one example of how this history is being rapidly lost or distorted.

Former residents also have knowledge of where key structures, residences, and local businesses were located. The amount of landscape disturbance within the community would indicate that intra-site close interval shovel testing may only supply broad site locations which almost always are no better than, and at times less reliable than, the information from historical maps and oral histories from former residents.

Close interval testing within this one community would have entailed the excavation of over 2,000 shovel tests — about the same number anticipated for the entire Taylors Creek survey tract of 241 ha or effectively doubling the required effort. Fortunately, at least for the successful administration of this survey, the town was discovered to have been heavily impacted by military activities over the past 50 years and the level of work was substantially reduced — focusing on establishing site boundaries — once this damage was documented.

One might argue that such testing falls into what the scope of work defines as "extensive site testing," which is "outside the scope of the contract" (Statement of Work, Archaeological Survey Requirements, Fort Stewart and Hunter Army Airfield, Georgia, page 5), especially since shovel testing has been developed in the Southeast as a means of identifying traditional Native American resources. It seems unlikely that Cahokia would be shovel tested at close intervals as part of a Phase I survey. Nor, for that matter, would an urban center be shovel tested at 20 m intervals in order to identify its existence and gather information for an eligibility determination.

Because of the individualistic nature of archaeology, there are various archaeological methods used by differing archaeologists to determine site boundaries as well as internal loci within sites. Thus, it is not our position that shovel testing should be abandoned when entering historic town site locations. Rather our concern is with the effectiveness of different approaches in a Phase 1 survey.

The study of low country settlement in the

Southeastern United States is still in its early stages. We have consulted a number of low country site studies within South Carolina, focusing on three particular studies: Jamestown (Elliott and Steen 1992), Old Dorchester (Barker 1993) and Childsbury Towne (Barr 1996). Each of these surveys used a different archaeological method to determine site parameters as well as the location of individual loci within the specific town site. At all three sites pedestrian surveys were conducted in an effort to locate features, surface scatters, and to determine high and low probability areas.

At Jamestown, although not stated in the report, the site map indicates that a 30 by 30 m grid was laid out and shovel tested. Three internal loci were isolated by this method. At Dorchester, Barker used ground penetrating radar, as opposed to shovel testing, to determine internal loci within the town. Four internal loci, located during this survey, were then recommended for shovel testing. At Childsbury Towne, a 10 by 10 m grid was laid out over the high probability areas and a 25% random sample survey was conducted. Four internal loci were isolated by this method and their locations corresponded to buildings shown on an early nineteenth century plat. All three of these surveys were conducted using dramatically different archaeological methods and all three were able to define the limits of the settlement in question, as well as define the location of internal loci. At none was intensive shovel testing used.

Taylors Creek contains a number of individual characteristics not found in any of the above studies. The town has been heavily impacted by military operations. As discovered during shovel testing, this impact reached as deep as 70 cm below the current ground surface. As well, it is doubtful that many subsurface architectural features remain from the town. This is primarily due to the architectural construction of the town's buildings, which were apparently set on pilings (based on the remnant photographs of the town). Also, oral history accounts state that the town was dismantled as opposed to being torn down or simply bulldozed into the ground. This also reduced the probability of remaining subsurface features.

Our concerns related to shovel testing at historic sites is not intended to suggest that no shovel testing should be undertaken. Rather, we wish to focus on the problems which may arise during the testing of large tracts of land, especially those that may contain settlements like Taylors Creek. At the Phase 1 survey level, we fear that many sites like Taylors Creek cannot be professionally evaluated as more than potentially eligible (and requiring more research) or not eligible (based on heavy disturbance). We seriously doubt that a well crafted and fully documented eligibility determination can often be achieved using reasonable expenditure of resources in shovel testing and a single 50 cm test.

In other words, there seems to be considerable justification to recognize that historic communities, such as Taylors Creek, are a special (or unusual) circumstance and require special approaches. In particular, we recommend that the first step for all communities known to exist on the base should be subjected to a detailed historical overview which incorporated both documentary and oral history sources.

Once this information is in hand, it seems appropriate to initiate limited shovel testing, using 30 m transects, to (1) identify the approximate boundaries of the community in conjunction with the historical documents and (2) assess the condition of the archaeological resources. Additional testing should be on a judgmental basis, in order to evaluate specific structures or site areas, with the goal of determining integrity.

This is likely, as in the case of Taylors Creek, to provide sufficient information to determine the site either potentially eligible (and requiring additional Phase II testing) or not eligible.

The Effectiveness of GPS Data

The technology of GPS, while new, is well developed because of its commercial applications. The work at Fort Stewart, however, has found that

the data, even from what is known as differentially corrected GPS or DGPS, contains errors of 200 m to 300 m. Although we have not been able to identify the source of this error, we can confirm that our equipment is correctly working. The variety of factors which may be affecting the data have been previously discussed in the **Research Strategy and Methods** section of this study.

Although the current strategy of acquiring GPS data appears to be inaccurate, it is not particularly costly and we do not suggest that it be immediately abandoned. Our only suggestion for improving the quality of that data (planning exact dates and times for data acquisition), however, would exceed the current scope and be very costly. There may be alternative approaches or techniques with which we are not familiar.

Our recommendation, therefore, is that the National Park Service explore the possibility of holding a workshop on GPS use or perhaps letting a contract for a GPS consultant to review and improve current data acquisition strategies. Until that time, we caution the National Park Service, Fort Stewart, and other users, that interpolated UTM coordinates are consistently more accurate than GPS acquired locational information.

Site Function and Duration of Use

Sassaman et al. (1990) suggest that the density of artifacts at prehistoric sites is a useful measure of the relative intensity of material discard at a site, stating that the amount of discard is assumed to be proportional to the "cumulative duration of site occupation, and/or the total number of site occupants, and/or the intensity of activities from which discarded debris was generated" (Sassaman et al. 1990:223). Lithic tool manufacture, however, generates a large volume of debris which creates a bias in measures of occupation duration/intensity and Sassaman and his colleagues recommend calculating density for total assemblages and for artifacts other than debitage.

Unfortunately, the entire surveys of the JAECK Drop Zone and Taylors Creek produced only a very few diagnostic lithic specimens. Most of the materials were flakes. Consequently, only density based only on the total assemblage could be calculated. They also warn that artifact density should only be calculated for subsurface assemblages with an adequate sample size. While only shovel test collections can be used, the sample sizes are typically small. Because of these problems, other types of site analysis such as tool to debitage ratios and assemblage diversity were determined to be inappropriate with the collections available.

Table 8 reveals that all of the recovered prehistoric sites have very low artifact densities, ranging from 11.1 artifacts per m^2 to 27.0 artifacts m^2 (with a mean of 16.1 artifacts per m^2 and a standard deviation of 6.3 artifacts). While it is not surprising that the largest (and best tested) site (9LI357) has the highest density (which tends to support its recommendation as potentially eligible), it was somewhat unexpected that the two smallest sites (9LI358 and 9LI359) would have the next two highest densities. Sites 9LG44 and 9LG45, both modest sized sites, have very low artifact densities, further supporting their evaluation as special use sites. While there may be a correlation between artifact density and topographic setting (both of the low density sites were found in the JAECK Drop Zone), this cannot be demonstrated with the available data.

Table 8.
Artifact density of prehistoric sites

Site	Components	Site Size (m^2)	Sub-surface testing (m^2)	Density
9LG44	Refuge/Deptford	2,325	0.63	12.7
9LG45	Savannah	4,122	0.09	11.1
9LI357	Middle Woodland	10,200	8.06	27.0
9LI358	Mississippian	1,611	1.44	15.3
9LI359	lithic	1,378	1.17	14.5

Overview of the Fort Stewart Chronology

One of the questions raised in the overview of the regional prehistoric chronologies was whether the Fort Stewart area was closely tied to the chronology proposed for the mouth of the Savannah River, or if the chronology suggested by

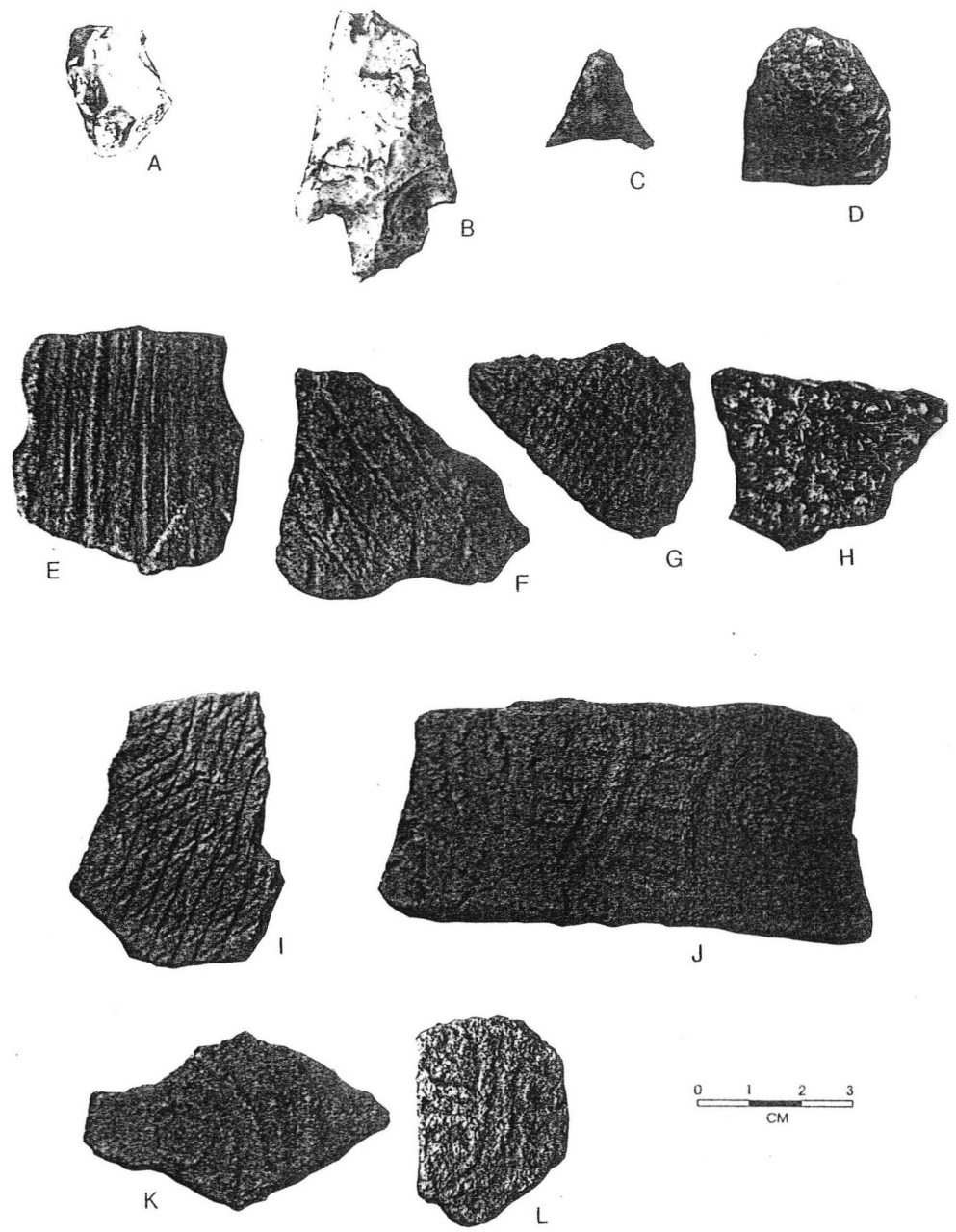


Figure 49. Prehistoric artifacts recovered from the JAECK Drop Zone and Taylors Creek surveys. A, Morrow Mountain projectile point base (9LI357-116); B, Small Savannah River Stemmed point (9LG61-236); C, small triangular projectile point (9LI358-168); D, end scraper (9LI362-1); E, Refuge/Deptford Simple Stamped (9LI357-139); F, sand-tempered Wilmington Cord Marked (9LI358-183); G, sand-tempered Wilmington Cord Marked (9LI358-146); H, Savannah Check Stamped (9LG45-210); I, Savannah Cord Marked (9LI357-138); J, Swift Creek Complicated Stamped (9LI362-1); K - L, Irene Complicated Stamped (9LI362-1).

more interior locations, such as the Ocmulgee Big Bend area, might be more appropriate. Like many of the other questions proposed, the data are sparse and we can only make tentative stabs at answering this question. In addition, the answer seems to be a qualified "yes" — there seem to be aspects of both coastal and interior coastal plain cultures present on Fort Stewart. Expressed most simply, this suggests that the fort's culture history, at least for the Woodland, is perhaps not nearly as neat and easily presented as suggested by Thomas et al. (1995:Figure 32).

Only three projectile points or point fragments were recovered during the survey. These included the probable base of a Morrow Mountain point which exhibits potlid or spalling fractures from fire damage, a Small Savannah River Stemmed point, and what is usually called a small triangular point in Georgia. The only other diagnostic lithic present in the survey was a broken end scraper. These specimens are illustrated in Figure 49.

Also present from the collections is a small quantity of sherds over 2.5 cm in diameter. A selection of these are also shown in Figure 49. The pottery present in the two study tracts included Stallings/St. Simons Plain pottery, Refuge/Deptford Simple Stamped, a small collection of what appears to be sandy paste Wilmington Cord Marked or Ocumulgee Cord Marked pottery, Savannah Cord Marked, Savannah Check Stamped, and Irene Complicated Stamped. What was perhaps most interesting was the presence of a small quantity of what appears to be Swift Creek Complicated Stamped pottery.

These wares represent a blending of both coastal and interior materials. The fiber-tempered pottery, which appears to be relatively common at Fort Stewart (Thomas et al. 1995:Table 9) is characteristic of the coastal chronology. Likewise the Refuge/Deptford material fits into the sequence established for the mouth of the Savannah River.

The Middle Woodland seems to be represented by only one type of pottery — a sandy paste ware with both heavy and fine cord marking. These sherds are similar to both the Wilmington reported from the Groton locality (Stoltman 1974:63) and the Ocmulgee cord marked materials from the Ocmulgee Big Bend region (Snow 1977). While these cord marked sherds are the single most common type, they were not found in sufficient numbers to allow a more precise typological evaluation or even discussion. Regardless, these wares appear to be most strongly associated with the interior coastal plain (although DePratter [1977:179] does briefly mention a gritty Middle Woodland cord marked pottery known as Chatham County Cord Marked). No materials which can be identified as clay/grog-tempered Wilmington, or St. Catherines were identified from the survey tracts.

The Late Woodland is represented by a very small quantity of Swift Creek pottery (found only in the collection from 9LI362). Swift Creek is relatively uncommon from the Savannah River region, being more common in southwest Georgia, on the Florida coast, and in northern Georgia (see, for example, Sassaman et al. 1990:201 and Anderson and Joseph 1988:231-232). It is of particular interest since it has not been previously reported from the Fort Stewart area (Thomas et al. 1995:113-114).

The Mississippian Period is represented by small quantities of Savannah Check Stamped and Savannah Cord Marked, as well as Irene Complicated Stamped. These ware are seemingly common to the coastal zone.

In sum, although the sample size is very small — a caution we realize the reader is tired of hearing — the collection includes an interesting assortment of both interior coastal plain and coastal zone materials. This assemblage clearly documents the importance of continuing research on the culture history of the Fort Stewart base.

SOURCES CITED

Anderson, David G.

1975 The Distribution of Prehistoric Ceramics in the Coastal Plain of South Carolina. Unpublished manuscript with appendices and data sheets, on file at the South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1985 Middle Woodland Societies on the Lower South Atlantic Slope: A View from Georgia and South Carolina. *Early Georgia* 13:29-66.

1990 A North American Paleoindian Projectile Point Database. *Current Research in the Pleistocene* 7:67-69.

1992 Models of Paleoindian and Early Archaic Settlement in the Lower Southeast. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth G. Sassaman, and Christopher Judge, pp. 28-47. Council of South Carolina Professional Archaeologists, Columbia.

1994 *The Savannah River Chiefdoms: Political Change in the Late Prehistoric Southeast*. University of Alabama Press, Tuscaloosa.

1995 *Test Excavations at Civil War Period Battery Halleck, Fort Pulaski National Monument, Chatham County, Georgia*. Interagency Archaeological Services Division, National Park Service, Atlanta.

Anderson, David G. and Glen T. Hanson

1988 Early Archaic Settlement in the Southeastern United States: A Case Study from the Savannah River Valley. *American Antiquity* 53:262-286.

Anderson, David G. and J.W. Joseph

1988 *Prehistory and History Along the Upper Savannah River: Technical Synthesis of Cultural Resource Investigations, Richard B. Russell Multiple Resource Area*. Vol. 1. Garrow and Associates, Inc., Atlanta. Prepared for the Savannah District, U.S. Army Corps of Engineers, Savannah, Georgia.

Anderson, David G., Kenneth G. Sassaman, and Christopher Judge (editors)

1992 *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*. Council of South Carolina Professional Archaeologists, Columbia.

Anderson, David G., R. Jerald Ledbetter, and Lisa O'Steen

1990 *Paleoindian Period Archaeology of Georgia*. Georgia Archaeological Research Design Paper 6. University of Georgia Laboratory of Archaeology Series Report 28. Athens.

Anonymous

1940 *Certain Aboriginal Culture Elements in Chatham County, Georgia*. Chatham County Archaeological Project, Work Projects Administration of Georgia. Ms. on file, Chicora Foundation, Inc., Columbia.

Ayres, Edward L.

1995 *Southern Crossing: A History of the American South 1877-1906*. Oxford University Press, Oxford.

Barker, Donnie B.

1993 *Ground Penetrating Radar Survey at Old Dorchester State Park "38DR3," Dorchester County and Charlestowne Landing "38CH1," Charleston County, South Carolina*. South Carolina Department of Parks, Recreation, and Tourism, Columbia.

Barr, William B.
1994 The Battle of Clouds Creek: A Question of Ethno-Historical Accuracy. Paper presented at the 1994 Society for Historical Archaeology Conference, Vancouver, British Columbia, Canada.

1995 Childsbury Towne and Ashley Ferry Town: Elements of Control in the Economic Landscape of Colonial South Carolina. In *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference 1995*, edited by Paul Forsythe Johnston, pp. 88-93. Washington, DC.

1996 *Strawberry Ferry and Childsbury Towne: An Economic Enterprise along the Western Branch of the Cooper River, St. John's Parish, Berkeley County, South Carolina*. Research Manuscript Series 222. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia. In press.

Bense, Judith A.
1994 *Archaeology of the Southeastern United States: Paleoindian to World War I.* Academic Press, New York.

Bense, Judith A., Hester A. Davis, Lorraine Heartfield, and Kathleen Deagan
1986 Standards and Guidelines for Quality Control in Archaeological Resource Management in the Southeastern United States. *Southeastern Archaeology* 5:52-62.

Braley, Chad O.
1990 The Lamar Ceramics of the Georgia Coast. In *Lamar Archaeology: Mississippian Chiefdoms in the Deep South*, edited by Mark Williams and Gary Shapiro, pp. 94-103. University of Alabama Press, Tascaloosa.

Braley, Chad O. and T.J. Price
1991 *Cultural Resources Suvey of Selected (FY90) Timber Harvesting Areas, Fort Gordon, Richmond and Columbia Counties, Georgia.* Southeastern Archaeological Services, Athens. Prepared for the U.S. Army Corps of Engineers, Savannah District, and the Division of Forestry and Engineering, Fort Gordon, Georgia.

Browder, Tonya A., Richard D. Brooks, and David C. Crass
1993 *Memories of Home: Dunbarton and Meyers Mill Remembered*. Savannah River Archaeological Research Heritage Series 1, South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Bullen, Ripley P.
1975 *A Guide to the Identification of Florida Projectile Points*. Kendall Books, Gainesville.

Butler, William B.
1987 Significance and Other Frustrations in the CRM Process. *American Antiquity* 52:820-829.

Cable, John S.
1982 Differences in Lithic Assemblages of Forager and Collector Strategies. In *Archaeological Survey and Reconnaissance Within the Ten-Year Floodpool Harry S. Truman Dam and Reservoir*, edited by Richard Taylor. Report submitted to the U.S. Army Corps of Engineers, Kansas City District.

Cable, John S. and James W. Mueller
1980 *The Cultural Resources Survey and Evaluation of US 421 from Siler City to Stanly, Chatham and Randolph Counties, North Carolina*. Commonwealth Associates, Inc., Jackson, Michigan. Submitted to North Carolina Department of Transportation, Raleigh.

Caldwell, Joseph R.
1943 *Cultural Relations of Four Indian Sites of the Georgia Coast*. Unpublished M.A. Thesis, Department of Anthropology, University of Chicago, Chicago.

1970 Chronology of the Georgia Coast. *Southeastern Archaeological Conference*

Bulletin 13:88-92.

Caldwell, Joseph R. and Catherine McCann
1941 *Irene Mound Site, Chatham County, Georgia*. University of Georgia Press, Athens.

Campbell, L. Janice, Mathilda Cox, and Thomas M. Prentice, Jr. (editors)
1996 *Fort Stewart and Hunter Army Airfield Historic Preservation Plan: Technical Synthesis Volume*. Report of Investigations 261. Prentice Thomas and Associates, n.p. Submitted to National Park Service, Southeast Division, Atlanta.

Chapman, Jefferson
1977 *Archaic Period Research in the Lower Little Tennessee River Valley, 1975: Icehouse Bottom, Harrison Branch, Thirty Acre Island, Calloway Island.* Report of Investigations 18. University of Tennessee, Knoxville.

1985a Archaeology and the Archaic Period in the Southern Ridge-an-Valley Province. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 137-179. The University of Alabama Press, University.

1985b *Tellico Archaeology: 12,000 Years of Native American History*. Reports of Investigations 43, Occasional Paper 5, University of Tennessee, Knoxville.

Clements, John
1989 *Georgia Facts: A Comprehensive Look At Georgia Today*. Clements Research II, Inc., Dallas.

Coakley, Robert W.
1989 The American Revolution: First Phase. In *American Military History*, pp. 41-69. Center of Military History, United States Army, Washington, D.C.

Coclanis, Peter
1989 *The Shadow of a Dream: Economic Life and Death in the South Carolina Low Country 1670-1920*. Oxford University Press, New York.

Coe, Joffre L.
1964 The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society* 54(5).

Coleman, Kenneth
1960 *Georgia History in Outline*. University of Georgia Press, Athens.

Coleman, Kenneth (editor)
1991 *A History of Georgia*. Second Edition. University of Georgia Press, Athens.

Conner, Beverly H. and David J. Hally
1979 Lithic Materials and Artifacts. In *Archaeological Investigations of the Little Egypt Site (9 Mu 102), Murray County, Ga., 1969 Season*, edited by David J. Hally, pp. 218-254. Laboratory of Archaeology Series Report 18. University of Georgia, Athens.

Coulter, E. Merton
1960 *Georgia: A Short History*. University of North Carolina, Chapel Hill.

Crook, Morgan
1978 *Mississippian Period Community Organizations on the Georgia Coast.* Ph.D. dissertation, University of Georgia. University Microfilms, Ann Arbor.

Daniel, I. Randolph
1992 Early Archaic Settlement in the Southeast: A North Carolina Perspective. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth E. Sassaman, and Christopher Judge, pp. 68-77. South Carolina Council of Professional Archaeologists, Columbia.

DeBow, J.D.B.
1854 *Statistical View of the United States*. A.O.P. Nicholson, Washington, D.C.

DePratter, Chester B.
1976 The Refuge Phase on the Coastal Plain of Georgia. *Early Georgia* 4:1-13.

1979 Ceramics. In The Anthropology of St.

Catherines Island 2. The Refuge-Deptford Mortuary Complex, edited by David H. Thomas and Clark . Larsen, pp. 109-132. *Anthropological Papers of the American Museum of Natural History* 56(1).

1983 *Late Prehistoric and Early Historic Chiefdoms in the Southeastern United States*. Ph.D. dissertation, University of Georgia, Athens. University Microfilms, Ann Arbor.

1991 *W.P.A. Archaeological Excavations in Chatham County, Georgia: 193-1942*. Laboratory of Archaeology Series Report 29. University of Georgia, Athens.

DePratter, Chester B. and James D. Howard
1980 Indian Occupation and Geologic Historic of the Georgia Coast: A 5,000 Year Summary. In *Excursions in Southeastern Geology: The Archaeology- Geology of the Georgia Coast*, edited by James D. Howard, Chester B. DePratter, and Robert W. Frey, pp. 1-65. Georgia Department of Natural Resources, Environmental Protection Division, Atlanta.

Donahue, Jack, Gary A. Cooke, and Frank J. Vento
n.d. Temper Types in St. Catherines Pottery. Ms. on file, Chicora Foundation, Inc., Columbia.

Drucker, Lesley, Ronald Anthony, Susan Jackson, Susan Krantz, and Carl Steen
1984 *An Archaeological Study of the Little River-Buffalo Creek Special Land Disposal Tract*. Carolina Archaeological Services, Columbia, South Carolina. Submitted to the U.S. Army Corps of Engineers, Savannah District, Savannah, Georgia.

Du Bois, W.E.B.
1992 Georgia: Invisible Empire State. In *These United States: Portraits of America from the 1920s*, edited by Daniel H. Borus, pp. 94-103. Cornell University Press, Ithaca.

Elliott, Daniel T. and Carl Steen
1992 *Jamestown Reconnaissance Survey*. Lamar Institute, Inc., Vanna, Georgia.

Elliott, Daniel T. and Roy Doyon
1981 *Archaeological and Historical Geography of the Savannah River Floodplain Near Augusta, Georgia*. Report 22. Laboratory of Anthropology, University of Georgia, Athens.

Elliott, Daniel T., J. Jerald Ledbetter, and Elizabeth A. Gordon
1994 *Data Recovery at Lovers Lane, Phinizy Swamp and the Old Dikes Sites, Bobby Jones Expressway Extension Corridor, Augusta, Georgia*. Occasional Papers in Cultural Resource Managment 7. Georgia Department of Transportation, Atlanta.

Ernst, Joseph A. and H. Roy Merrens
1973 "Camden's Turrets Pierce the Skies!": The Urban Process in the Southern Colonies during the Eighteenth Century. *The William and Mary Quarterly*, 30:549-574.

Fish, Paul R.
1976 *Patterns of Prehistoric Site Distribution in Effingham and Screven Counties, Georgia: Results of an Archaeological Survey of the U.S.D.A. Soil Conservation Service in Ebenezer Creek Watershed*. Laboratory of Archaeology Series Report 11. University of Georgia, Athens.

Ferguson, Leland G.
1971 *South Appalachian Mississippian*. Ph.D. dissertation, University of North Carolina, Chapel Hill. University Microfilms, Ann Arbor, Michigan.

Ferguson, Leland and David Babson
n.d. *Survey of Plantation Sites Along the East Branch of the Cooper River: A Model for Predicting Archaeological Site Locations*. Ms. on file, Department of Anthropology, University of South Carolina, Columbia.

Frech, Mary L. and William F. Swindler (editors)
1973 *Chronology and Documentary Handbook of the State of Georgia*. Oceana Publications, Dobbs Ferry,

New York.

Friedheim, William and Ronald Jackson
1996 *Freedom's Unfinished Revolution: An Inquiry into the Civil War and Reconstruction*. The New Press, New York.

Garrow, Patrick H. (editor)
1982 *Archaeological Investigations on the Washington, D.C. Civic Center Site*. Soil Systems, Inc., n.p.

Glassow, Michael A.
1977 Issues in Evaluating the Significance of Archaeological Resources. *American Antiquity* 42:413-420.

Goad, Sharon I.
1979 *Chert Resources in Georgia: Archaeological and Geological Perspectives*. Report Number 21. Laboratory of Archaeology Series, University of Georgia, Athens.

Goodyear, Albert C., John H. House, and Neal W. Ackerly
1979 *Laurens-Anderson: An Archaeological Study of the Inter-Riverine Piedmont*. Anthropological Studies 4, Occasional Papers of the Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Green, Michael D.
1979 *The Creeks: A Critical Bibliography*. Indiana University Press, Bloomington.

Green, William
1991 *The Search for Altamaha: The Archaeology and Ethnohistory of an Early 18th Century Yamasee Indian Town*. Unpublished M.A. Thesis, Department of Anthropology, University of South Carolina, Columbia.

Griffin, James B.
1943 An Analysis and Interpretation of the Ceramic Remains from Two Sites Near Beaufort, S.C. *Bureau of American Ethnology Bulletin* 133:155-168.

1985 Changing Concepts of the Prehistoric Mississippian Cultures of the Eastern United States. In *Alabama and the Borderlands: From Prehistory to Statehood*, edited by R.R. Badger and L.A. Clayton, pp. 40-63. University of Alabama Press, University, Alabama.

Guernsey, Alfred H. and Henry M. Alden (editors)
1977 [1866] *Harpers Pictorial History of the Civil War*. Harper and Brothers, n.p. 1977 facsimile ed. Fairfax Press, n.p.

Hilliard, Sam B.
1984 *Atlas of Antebellum Southern Agriculture*. Louisiana State University Press, Baton Rouge.

Hodler, Thomas W. and Howard A. Schretter
1986 *The Atlas of Georgia*. Institute of Community and Area Development, University of Georgia, Athens.

Hvidt, Kristian (editor)
1980 *Von Reck's Voyage: Drawings and Journal of Philip Goerg Friedrich von Reck*. The Beehive Press, Savannah, Georgia.

Jackson, Susan H., Lesley M. Drucker, and Debra K. Martin
1988 *Cultural Resources Inventory Survey of the Brigade Maneuver Area, Fort Stewart, Georgia*. Resource Studies Series 115. Carolina Archaeological Services, Columbia.

Jefferies, Richard W.
1994 The Swift Creek Site and Woodland Platform Mounds in the Southeastern United States. In *Ocmulgee Archaeology, 1936-1986*, edited by David J. Hally, pp.71-83. The University Press of Georgia, Athens.

Jones, Grant D.
1978 The Ethnohistory of the Guale Coast Through 1684. In *The Anthropology of St. Catherines Island 1. Natural and Cultural History*, edited by David Hurst Thomas, Grant D. Jones, Roger S. Durham, and Clark Spencer Larsen, pp. 178-209. Anthropological Papers of the American Museum of

Natural History 55(2).

Keller, J.H., A.R. Kelly, and E.V. McMichael
1962 The Mandeville Site in Southwestern Georgia. *American Antiquity* 27:336-355.

Kennedy, Stetson
1990 *Jim Crow Guide: The Way It Was*. Florida Atlantic University Press, Boca Raton.

Knight, Lucian Lamar
1917 *A Standard History of Georgia and Georgians*. Vol. 2. Lewis Publishing, Chicago.

Küchler, A.W.
1964 *Potential Natural Vegetation of the Conterminous United States*. Special Publication 36. American Geographical Society, New York.

Lane, Mills
1993a *Standing Upon the Mouth of a Volcano: New South Georgia*. Beehive Press, Savannah.

1993b *Times that Prove People's Principles: Civil War in Georgia*. Beehive Press, Savannah.

Larsen, Clark Spencer (editor)
1990 *The Archaeology of Mission Santa Catalina de Guale: 2. Biocultural Interpretations of a Population in Transition*. Anthropological Papers of the American Museum of Natural History 68.

Larsen, Clark Spencer and David Hurst Thomas
1986 *The Archaeology of St. Catherines Island:5. The South Mound Complex*. Anthropological Papers of the American Museum of Natural History 63(1).

Larson, Lewis H., Jr.
1955 Unusual Figurine from the Georgia Coast. *Florida Anthropologist* 10(1-2):37-52.

1969 *Aboriginal Subsistence Technology on the Southeastern Coastal Plain During the Late Prehistoric Period*. Ph.D. dissertation, University of Michigan, Ann Arbor. University Microfilms, Ann Arbor, Michigan.

1978 Historic Guale Indians of the Georgia Coast and the Impact of the Spanish Mission Effort. In *Tacachale: Essays on the Indians of Florida and Southeastern Georgia During the Historic Period*, edited by Jerald Milanich and S. Proctor, pp. 120-140. University of Florida Press, Gainesville.

1980 *Aboriginal Subsistence Technology on the Southeastern Coastal Plain During the Late Historic Period*. Ripley P. Bullen Monographs in Anthropology and History 2. University Presses of Florida, Gainesville.

Ledbetter, R. Jerald
1995 *Archaeological Investigations at Mill Branch Sites 9WR4 and 9WR11, Warrent County, Georgia*. Technical Reports Number 3. Interagency Archaeological Services Division, National Park Service, Atlanta.

Ledbetter, R. Jerald, David G. Anderson, and Lisa D. O'Steen
1992 Paleoindian Research in Georgia. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth G. Sassaman, and Christopher Judge, pp. 248-262. Council of South Carolina Professional Archaeologists, Columbia.

Ledbetter, R. Jerald, Stephen A. Kowalewski, and Lisa O'Steen
1991 Chert of Southern Oconee County, Georgia. *Early Georgia* 9:1-13.

Lewis, Kenneth E.
1984 *The American Frontier: An Archaeological Study of Settlement Pattern and Process*. Academic Press, New York.

1985 Functional Variation Among Settlements. In *The Archaeology of Frontiers and Boundaries*, edited by

Stanton W. Green and Stephen M. Perlman, pp. 251-274. Academic Press, New York.

Looper, Edward E.
1982 *Soil Survey of Liberty and Long Counties, Georgia*. U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C.

Mathews, Thomas D., Frank W. Stapor, Jr., Charles R. Richter, John V. Miglarese, Michael D. McKenzie, and Lee R. Barclay
1980 *Ecological Characterization of the Sea Island Coastal Region of South Carolina and Georgia*, vol. 1. Office of Biological Services, Fish and Wildlife Service, Washington, D.C.

Michie, James L.
1968 The Brier Creek Lanceolate. *The Chesopiean* 4:123.

1977 *The Late Pleistocene Human Occupation of South Carolina*. Unpublished Honor's Thesis, Department of Anthropology, University of South Carolina, Columbia.

Milanich, Jerald T.
1971 *The Deptford Phase: An Archaeological Reconstruction*. Ph.D. Dissertation, University of Florida. University Microfilms, Ann Arbor.

Milanich, Jerald T. and Charles H. Fairbanks
1980 *Florida Archaeology*. Academic Press, New York.

Miller, George L.
1980 Classification and Economic Scaling of 19th Century Ceramics. *Historical Archaeology* 14:1-40.

1991 A Revised Set of CC Values for Classification and Economic Scaling of English Ceramics from 1787 to 1880. *Historical Archaeology* 25:1-25.

Miller, J.J., M.L. Fryman, J.W. Griffin, C.D. Lee, and D.E. Swindell
1993 *A Historical, Archaeological, and Architectural Survey of Fort Stewart Military Reservation, Georgia*. Professional Archaeological Services, Department of Anthropology, University of Georgia, Athens.

Nevens, Allan
1971 *The War for the Union*. Vol. IV. Charles Scribner's Sons, New York.

Noel Hume, Ivor
1970 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.

Oliver, Billy L.
1981 *The Piedmont Tradition: Refinement of the Savannah River Stemmed Point Type*. Unpublished Master's thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

1985 Tradition and Typology: Basic Elements of the Carolina Projectile Point Sequence. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 195-211. The University of Alabama Press, University.

Price, Cynthia
1979 *19th Century Ceramics in the Eastern Ozark Boarder Region*. Monograph Series 1. Center for Archaeological Research, Southwest Missouri University, Springfield.

Reese, Trevor R.. (editor)
1974 An Extract of the Rev. Mr. John Wesley's Journal From his Embarking for Georgia to his Return to London. In *Our First Visit in America: Early Reports from the Colony of Georgia 1732-1740*, pp. 185-242. Beehive Press, Savannah, Georgia.

Rose, Willie Lee
1964 *Rehearsal for Reconstruction: The Port Royal Experiment*. Oxford University Press, New York.

Rowland, Larry
1987 "Alone on the River:" The Rise and Fall of the Savannah River Rice Plantations of St. Peters Parish, South Carolina. *South Carolina Historical*

Magazine 88(3): 121-150.

Sassaman, Kenneth E.
1985 A Preliminary Typological Assessment of MALA Hafted Bifaces from the Pen Point Site, Barnwell County, South Carolina. *South Carolina Antiquities* 17: 1-17.

1993 *Early Woodland Settlement in the Aiken Plateau: Archaeological Investigations at 38AK157, Savannah River Site, Aiken County, South Carolina*. Savannah River Archaeological Research Papers 3. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Sassaman, Kenneth E. and David G. Anderson
1990 Typology and Chronology. In *Native-American Prehistory of the Middle Savannah River Valley*, edited by Kenneth E. Sassaman, Mark J. Brooks, Glen T. Hanson, and David G. Anderson, pp. 143-216. Savannah River Archaeological Research Publication 1. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1994 *Middle and Late Archaic Archaeological Records of South Carolina: A Synthesis for Research and Resource Management*. Council of South Carolina Professional Archaeologists, Columbia.

Sassaman, Kenneth E., Mark J. Brooks, Glen T. Hanson, and David G. Anderson
1990 *Native American Prehistory of the Middle Savannah River Valley*. Savannah River Archaeological Research Papers 1. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Schnell, Frank T. and Newell O. Wright, Jr.
1993 *Mississippian Period Archaeology of the Georgia Coastal Plain*. Laboratory of Archaeology Series Report 26. University of Georgia, Athens.

Sears, William H.
1956 *Excavations at Kolomoki: Final Report*. University of Georgia Series in Anthropology 5. University of Georgia Press, Athens.

Shelford, Victor E.
1963 *The Ecology of North America*. University of Illinois Press, Urbana.

Shantz, H.L. and Zon, Raphael
1936 Natural Vegetation. In *Atlas of American Agriculture*, edited by O.E. Baker, pp. 1-29. U.S. Department of Agriculture, Washington, D.C.

Service, Elman R.
1966 *The Hunters*. Prentice-Hall, Englewood Cliffs, New Jersey.

Silver, Timothy
1990 *A New Face on the Countryside: Indians, Colonists, and Slaves in South Atlantic Forests, 1500-1800*. Oxford University Press, New York.

Smith, Betty A.
1972 *An Analysis of Regional Variations of Deptford Pottery*. Unpublished M.A. Thesis, Department of Anthropology, University of Georgia, Athens.

Smith, Bruce D.
1986 The Archaeology of the Southeastern United States: From Dalton to DeSoto, 10,500 -500 B.P. *Advances in World Archaeology* 5:1-88.

Smith, Hale G.
1948 Two Historical Archaeological Periods in Florida. *American Antiquity* 13:313-319.

Smith, Julia F.
1985 *Slavery and Rice Culture in Low Country Georgia, 1750-1860*. University of Tennessee Press, Knoxville, Tennessee.

Smith, Marvin T.
1978 *Excavations at Several Woodland and Archaic Camp and Workshop Sites in Laurens County, Georgia*. Laboratory of Archaeology Series Report 16. University of Georgia, Athens.

Snow, Frankie
1977 *An Archaeological Survey of the Ocmulgee Big Bend Region: A Preliminary Report*. Occasional Papers from South Georgia 3. South Georgia College, Douglas, Georgia.

1990 Pine Barrens Lamar. In *Lamar Archaeology: Mississippian Chiefdoms in the Deep South*, edited by Mark Williams and Gary Shapiro, pp. 82-93. University of Alabama Press, Tascaloosa.

South, Stanley
1977 *Method and Theory in Historical Archaeology*. Academic Press, New York.

1993 *The Search for John Bartlam at Cain Hoy: America's First Creamware Potter*. Research Manuscript Series 219. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Stoltman, James B.
1974 *Groton Plantation: An Archaeological Study of a South Carolina Locality*. Monographs of the Peabody Museum 1. Harvard University, Cambridge.

Thomas, David Hurst
1987 *The Archaeology of Mission Santa Catalina de Guale: 1. Search and Discovery*. Anthropological Papers of the American Museum of Natural History 63(2).

Thomas, David Hurst and Clark Spencer Larsen
1979 *The Anthropology of St. Catherines Island 2. The Refuge-Deptford Mortuary Complex*. Anthropological Papers of the American Museum of Natural History 56(1).

Thomas, Prentice M. Jr., L. Janice Campbell, and Mathilda Cox
1995 *Draft Technical Synthesis of Cultural Resources Investigation at Fort Stewart and Hunter Army Airfield, Bryan, Chatham, Evans, Long. Liberty, and Tattnall Counties, Georgia*. Prentice Thomas and Associates, n.p. Prepared for National Park Service, Southeast Regional Office, Atlanta.

Townsend, Jan, John H. Sprinkle, Jr., and John Knoerl
1993 *Guidelines for Evaluating and Registering Historical Archaeological Sites and Districts*. Bulletin 36. National Park Service, National Register of Historic Places, Washington, D.C.

Trinkley, Michael
1976 *A Typology of Thom's Creek Pottery for the South Carolina Coast*. Unpublished M.A. Thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

1980 *Investigation of the Woodland Period Along the South Carolina Coast*. Ph.D. Dissertation, University of North Carolina, Chapel Hill. University Microfilms, Ann Arbor.

1985 The Form and Function of South Carolina's Early Woodland Shell Rings. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 102-118. University of Alabama Press, University, Alabama.

1990 *An Archaeological Context for the South Carolina Woodland Period*. Research Series 22. Chicora Foundation, Inc., Columbia.

Trinkley, Michael and Natalie Adams
1994 *Middle and Late Woodland Life at Old House Creek, Hilton Head Island, South Carolina*. Research Series 42. Chicora Foundation, Inc., Columbia.

Trinkley, Michael, Debi Hacker, and Natalie Adams
1995 *Broom Hall Plantation: "A Pleasant One and in a Good Neighborhood."* Research Series 44. Chicora Foundation, Inc., Columbia.

Walthall, John A.
1980 *Prehistoric Indians of the Southeast: Archaeology of Alabama*. University of Alabama Press, University.

Ward, Trawick
1983 Whites Creek: The Second Time Around. *South Carolina Antiquities* 15:63-65.

Waring, Antonio J., Jr.
1968 The Refuge Site, Jasper County, South Carolina. In *The Waring Papers: The Collected Works of Antonio J. Waring, Jr.*, edited by Stephen B. Williams, pp. 198-208. Papers of the Peabody Museum of Archaeology and Ethnology 58.

Watts, W.A.
1971 Postglacial and Interglacial Vegetation History of Southern Georgia and Central Florida. *Ecology* 52:666-690.

1980 Late Quaternary Vegetation History at White Pond on the Inner Coastal Plain of South Carolina. *Quaternary Research* 13:187-199.

Watts, W.A. and M. Stuiver
1980 Late Wisconsin Climate of Northern Florida and the Origin of Species Rich Deciduous Forests. *Science* 210:325-327.

Weir, Robert
1983 *South Carolina: A History*. KTO Press, Millwood, New York.

Whitehead, Donald R.
1965 Palynology and Pleistocene Phytogeography of Unglaciated Eastern North America. In *The Quaternary of the United States*, edited by W.E. Wright, Jr. and David G. Fry. Princeton University Press, Princeton.

1973 Late-Wisconsin Vegetational Changes in Unglaciated Eastern North America. *Quaternary Research* 3(4):621-631.

Willey, Gordon R.
1949 *Archaeology of the Florida Gulf Coast.* Smithsonian Miscellaneous Collections 113.

1966 *An Introduction to American Archaeology*. Vol. 1: North and Middle America. Prentice-Hall, Englewood Cliffs, New Jersey.

Williams, Stephen B. (editor)
1968 *The Waring Papers: The Collected Works of Antonio J. Waring, Jr.* Papers of the Peabody Museum of Archaeology and Ethnology 58.

Wrenn, Tony P. and Elizabeth D. Mulloy
1972 *America's Forgotten Architecture*. Pantheon Books, New York.

Wright, H.E., Jr.
1976 The Dynamic Nature of Holocene Vegetation: A Problem of Paleoclimatic Biogeography, and Stratigraphic Nomenclature. *Quaternary Research* 6:581-596.

Writers' Program
1990 *Georgia: The WPA Guide to its Towns and Countryside*. Compiled by the Writers' Program of the Works Progress Administration. University of South Carolina Press, Columbia.

Yarbrough, Bird and Paul Yarbrough
1986 *Taylors Creek: A Story of the Community and Her People, 1760-1986*. A Press, Greenville.

Zierden, Martha, Elizabeth J. Reitz, and Daniel Weinand
1995 *Initial Archaeological Testing: The Nathaniel Russell House*. Archaeological Contributions 24. The Charleston Museum, Charleston, South Carolina.

APPENDIX 1.
CATALOG OF RECOVERED MATERIALS

Site Number 9LI57

Recorder: R BRINSON

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
1	surface	1	whiteware undecorated	X
	"	31	flakes	
	"	1	scraper	X
	"	11	prehistoric sherds	X
	"	19	prehistoric sherds (small)	

Site Number 9LI307

Recorder: R BRINSON

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
2	surface	3	prehistoric sherds (small)	

Site Number 9LI311

Recorder: R BRINSON

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
3	TR5, ST1	1	whiteware, undec	X
		1	whiteware, blue tp	X
		1	brown glass	
		6	aqua glass	
		8	clear glass	
		1	pink glass	X
		4	nails	X

4	T6, ST1	1	whiteware, undec	X
5	T6, ST2	3	whiteware, undec	X
		1	coarse red earthenware	X
		2	brown glass	X
		5	aqua glass	X
		4	clear glass	X
		1	clear glass bottle	X
		10	window glass	X
		1	brass tube	
		1	nail	
6	T5&6, N180E200	1	blue glass	
		1	aqua glass	
		3	clear glass	
7	T6, N210E170	1	whiteware, undecorated	X
		1	brown glass	X
8	T5&6, N230E190	1	whiteware, undecorated	X
9	T6, N250E170	1	unidentified iron	
10	T8, ST1	1	black glass	
		1	aqua glass	
		1	brick frag (discarded)	
11	T8&9, ST1, N180E150	3	nails	X
12	T8&9, N189E200 Testing	3	clear glass	
		1	aqua glass	
13	T9, ST1	1	green glass	
		1	clear glass	
		4	brick frags (discarded)	
14	T9, ST1	3	window glass	X
		1	nail	X
		1	brass eraser head	X
15	T10, ST3	1	brown glass	
16	T12, ST2 Level 1	2	prehistoric sherds (small)	
17	T12, ST2 Level 2	1	flake	
18	T16, ST1	1	nail fragment	
19	T16, ST2	1	whiteware, undec	
		2	clear glass	
		1	light green glass	
		2	window glass	
		1	brass buckle	X
20	T16, ST2, N240E200	1	aqua glass	
21	T16, N250E200	1	whiteware, molded	
22	T17, ST1	1	whiteware, undecorated	X
		1	porcelain	X
		1	burnt refined earthenware	X
		1	coarse red earthenware, no glaze	X
		1	clear glass	X
		2	aqua glass	X
		1	nail	X
23	T17, ST2	1	whiteware, undecorated	X
		1	alkaline glaze stoneware	X
		1	turpentine pot body fragment	X

24	T22, ST1	1	manganese glass		
		1	aqua glass		
		1	window glass		
		1	nail		
25	T22, ST2	1	whiteware, undecorated		X
26	T22, surface 15 m N of ST1	1	pearlware, blue edge		X
27	T23, ST1	1	window glass, melted		
28	T52, ST4	1	whiteware, undecorated		X
29	T53, ST5	1	whiteware, undecorated		X
30	T62, N160E360	1	delft		X
31	T62, N180E360	1	porcelain		X
32	T77, ST1	1	unidentified iron		
33	T110, ST6	1	brown glass		
		1	aqua glass, melted		
		1	window glass		
34	T135, ST1	1	clear glass		
		1	manganese glass		
		1	aqua glass		
		1	nail		
35	T138, N200E280	1	whiteware undecorated		X
		1	aqua glass		
		5	clear glass	X	
36	T138, ST2	1	aqua glass		
		1	coal fragment		
37	T139, ST6	1	turpentine pot fragment		X
38	T139, ST7	1	whiteware, undecorated	X	
		2	whiteware, annular		X
		1	whiteware, blue transfer print		X
39	T139, ST9	1	nail		X
40	T139 surface	2	yellow ware		X
		8	whiteware, undecorated		X
		1	whiteware, annular		X
		1	whiteware, blue hand painted		X
		3	whiteware, poly hand painted		X
		1	whiteware, sponge decorated	X	
		1	black glass		
		4	manganese glass		
		3	aqua glass		
		1	flake		
41	T142, ST1	1	whiteware, undecorated		
		3	clear glass		
42	T142, ST2	1	clear glass		
		1	window glass		
43	T144, surface	1	whiteware, undecorated	X	
44	T148, ST1	1	black glass		
		1	window glass		
45	T148, ST3	17	window glass		
46	T148, ST4	1	whiteware, undecorated		X
		9	aqua glass		X

		36	clear glass	X
		2	turpentine pot fragments	X
		2	jar lids	X
		13	nails	X
47	T148, ST7	1	whiteware, undecorated	X
		1	clear glass	
		2	aqua glass	
		4	window glass	
		1	brass grommet	X
		1	nail	X
		1	brass bell fragment	X
48	T148, ST8	1	brown glass	
		2	aqua glass	
		1	nail	
49	T149, ST6	1	staple	X
50	T149, ST 7	1	whiteware, undecorated	X
		1	lamp cover	X
		1	window glass	X
51	T153, ST 1	1	" 6 pack ring "	
		1	cellophane wrapper	
		1	green plastic fragment	
52	TU6, Level 1	1	aqua glass	
		1	rubber fragment	
		1	tiparillo mouthpiece	
		1	fabric fragment	
53	TU6, Level 5	1	cigarette filter	
54	General surface	1	turpentine pot	X

Site Number 9LI357

Recorder: WO'CONNOR

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
55	N160E220	1	flake	
56	N170E220, Level 1	1	flake	
57	N170E220, Level 2	1	flake	
58	N170E250, Level 1	11	daub fragments	
59	N180E270	2	prehistoric sherds	
60	N180E300, Level 1	1	pearlware, annular	
61	N180E350, Level 1	1	prehistoric sherd	
62	N180E350, Level 2	3	daub	
63	N180E350, Level 3	2	daub	
64	N190E180, Level 1	2	prehistoric sherds	
65	N190E180, Level 2	1	flake	
66	N190E180, Level 3	1	flake	
67	N190E200	1	flake	
68	N190E220	2	flakes	

		2	prehistoric sherds	X
69	N190E230	2	flakes	
		1	chert fragment	
		3	prehistoric sherds	
70	N190E240	1	flake	
		3	prehistoric sherds	
71	N190E250	5	flakes	
		2	prehistoric sherds	
72	N190E260, Level 1	2	flakes	
		3	prehistoric sherds	
73	N190E260, Level 2	1	flake	
		2	prehistoric sherds	
74	N190E270, Level 1	1	flake	
75	N190E270, Level 2	1	prehistoric sherd	
76	N190E280, Level 1	1	pearlware, undecorated	
77	N190E280, Level 2	3	flakes	
		2	prehistoric sherds	
78	N190E290, Level 1	1	flake	
		2	prehistoric sherds	
79	N190E290, Level 2	1	flake	
80	N190E300, Level 1	1	flake	
81	N190E310, Level 2	1	prehistoric sherd	
82	N190E320, Level 1	1	flake	
83	N190E320, Level 2	1	prehistoric sherd	
84	N200E180, Level 2	1	prehistoric sherd	
85	N200E200, Level 2	1	prehistoric sherd	
86	N200E210, Level 2	2	flakes	
		1	prehistoric sherd	X
87	N200E220, Level 1	3	flakes	
		1	prehistoric sherd	
88	N200E230, Level 2	1	prehistoric sherd	
89	N200E240, Level 2	1	flake	
		1	prehistoric sherd	
90	N200E250, Level 2	2	prehistoric sherds	
91	N200E260	2	prehistoric sherds	
92	N200E270	2	flakes	
93	N200E280, Level 1	1	flake	
		3	prehistoric sherds	
94	N200E290, Level 2	3	flakes	
		1	prehistoric sherd	
95	N200E300, Level 1	1	prehistoric sherd	
96	N200E300, Level 2	1	flake	
97	N200E310, Level 2	1	flake	
		1	prehistoric sherd	
98	N200E330, Level 1	1	flake	
99	N200E330, Level 2	1	flake	
		1	vial charcoal	
100	N200E340, Level 1	1	nail fragment	
101	N200E360, Level 1	1	flake	
102	N200E370, Level 1	1	kaolin pipe bowl fragment	
103	N200E370, Level 2	1	gunflint	X
104	N200E380, Level 1	6	brick fragments	
105	N200E390, Level 1	8	brick fragments	

106	N210E190, Level 1	1	prehistoric sherd		
107	N210E200	1	prehistoric sherd		
108	N210E210	1	flake		
		3	prehistoric sherds		
109	N210E220, Level 2	2	prehistoric sherds		
110	N210E240	2	prehistoric sherds		
111	N210E270, Level 2	1	flake		
		1	prehistoric sherd		
112	N210E280, Level 1	1	flake		
113	N220E180, Level 2	1	flake		
114	N220E200	1	flake		
		2	prehistoric sherds		
115	N220E230, Level 2	4	flakes		
		2	prehistoric sherds		
116	N220E240, Level 2	1	chert biface		X
117	N220E250, Level 2	1	prehistoric sherd		X
118	N220E270, Level 1	1	prehistoric sherd		
119	N230E150 interface between Level 1 & 2	1	prehistoric sherd		
120	N230E160, Level 1	1	prehistoric sherd		
121	N230E170, Level 2	1	prehistoric sherd		
122	N230E180, Level 1	1	flake		
		1	prehistoric sherd		
123	N230E180, Level 2	4	flakes		
		2	prehistoric sherds		
124	N230E190, Level 1	1	flake		
		3	prehistoric sherds		
125	N230E190, Level 2	1	prehistoric sherd		
126	N230E200	1	prehistoric sherd		
127	N230E210, Level 1	1	flake		
		1	prehistoric sherd		
128	N230E210, Level 2	2	prehistoric sherds		
129	N230E220, Level 2	1	flake		
		3	prehistoric sherds		
		1	animal bone		
130	N230E230, Level 1	1	flake		
		1	prehistoric sherd		
131	N240E180, Level 2	2	prehistoric sherds		
132	N240E190, Level 2	1	prehistoric sherd		
133	N240E200	2	flakes		
		3	prehistoric sherds		X
134	N240E210, Level 2	1	prehistoric sherd		
135	N240E220, Level 2	1	flake		
136	N240E230, Level 2	1	prehistoric sherd		
137	N250E170, Level 1	1	flake		
138	N250E180, Level 2	1	flake		
		1	prehistoric sherd		X
139	N250E190	1	prehistoric sherd		X
140	N250E210	1	prehistoric sherd		
141	N250E210	1	prehistoric sherd	X	
142	N250E200	1	flake		
		3	prehistoric sherds		
143	N250E220, Level 1	1	prehistoric sherd		
144	N260E200	2	prehistoric sherds	X	

145	N260E210	1	flake		
146	N260E220, Level 1	1	flake		
		1	prehistoric sherd	X	
147	N270E210, Level 1	1	prehistoric sherd		
148	N270E210, Level 2	2	flakes		
149	N270E190, Level 2	1	flake(large)		X
		1	prehistoric sherd		X
150	N270E200	2	flakes		
151	N290E210	1	prehistoric sherd		
152	TU1, Level 1	1	aluminum lap link		
		1	used flake		
		2	flakes		
153	TU1, Level 2	4	flakes		
154	TU1, Level 4	2	flakes		
		2	prehistoric sherds		
155	TU1, Level 5	3	flakes		
156	TU1, Level 7	1	flake		
157	TU1, Level 8	1	flake		
		1	prehistoric sherd		
158	TU2, Level 1	1	prehistoric sherd		
159	TU2, Level 3	2	flakes		
		1	burnt bone		
160	TU2, Level 4	1	prehistoric sherd		
161	TU2, Level 5	1	flake		
		1	burnt bone		
162	TU2, Level 6	1	prehistoric sherd		X
163	TU2, Level 7	2	flakes		
164	TU2, Level 8	5	prehistoric sherds		
165	TU2, Level 9	1	flake		
166	Surface from food plot T58-63	3	whiteware, undecorated		
		1	lead glaze slipware		
		2	black glass		
		2	flakes		
167	General surface	1	flake		
		1	prehistoric sherd		

Site Number 9LI358

Recorder: WO'CONNOR

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
168	T73, ST6	3	prehistoric sherds	
		1	projectile point	X
169	T73, hole#1	1	amber glass	
		3	nails	X
170	T73, hole#2	1	aqua glass	
		3	nails	X
171	T73, hole#6, 10W	2	flakes	

172	T73, hole#6, 20W	1	prehistoric sherd	
173	T73, ST6, 10 m N	1	prehistoric sherd	
174	T73, N190E190	1	flake	
		1	prehistoric sherd	
175	T73, N200E180	1	prehistoric sherd	
176	T73, N205E195	1	prehistoric sherd	
177	T73, N210E170	2	flakes	
178	T73, N210E190	1	clear glass	
179	T73, N210E210	1	prehistoric sherd	
180	T73, N220E180	1	prehistoric sherd	
181	T73, N220E210	1	flake	
182	T73, N230E180	1	flake	
183	TR73, hole#3	1	flake	
		2	prehistoric sherds	
		1	prehistoric sherd	X

Site Number 9LI359

Recorder: WO'CONNOR

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
184	T78, N200E150	1	flake	
185	T78, N200E170	2	flakes	
186	T78, N200E210	2	prehistoric sherds	
187	T78, N210E200	1	prehistoric sherd	
188	T78-79, ST6	1	prehistoric sherd	
189	T78-79, N220E150	1	flake	
190	T78-79, N230E150	1	flake	
191	T78-79, TU5, N220E160	1	flake	
192	T78-79, TU5, N230E160	1	flake	
193	T79, ST6	2	flakes	
194	TU5, Level 1	1	prehistoric sherd	
195	TU5, Level 2	1	flake	
196	TU5, Level 4	1	flake	
197	TU5, Level 5	1	flake	

Site Number 9LG44

Recorder: WO'CONNOR

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
198	T25I, ST5, N200E200	1	flake	

199	T25I, ST5, N210E200	1	flake	
200	T25I, ST5, N220E200	1	flake	
201	T25I, ST7, N240E200	1	flake	
202	T25I, ST5, N260E200	1	prehistoric sherd	X
203	T25I, ST5, S180E200	1	flake	
204	T25I, ST5, S190E200	2	flakes	
205	Surface 15m N of TU	1	used flake	X
206	Surface 20m SE of N210E200	1	flake	

Site Number 9LG45

Recorder: WO'CONNOR

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
207	T23, ST7, Level 2	1	prehistoric flake	
208	Surface N edge of road bed	2	prehistoric flakes	
		1	prehistoric sherd	
209	Surface in road bed	1	prehistoric sherd	
210	Surface road end on T24	1	prehistoric sherd	X

Site Number 9LG46

Recorder: WO'CONNOR

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
211	TU1, zone 1	1	alkaline glaze stoneware	X
		4	brown stoneware	X
		1	coarse red earthenware	X
		1	milk glass	X
		2	clear glass	X
		1	manganese glass	X
		2	brown glass	X
212	TU1, zone 2	1	brown stoneware	X
213	T418, ST9	1	whiteware, molded	X
214	T418, ST10, N200E180	1	aqua glass	
215	T418, ST10, N200E190	1	manganese glass	
216	T418, ST10, N200E200	1	manganese glass	
		1	aqua glass	
217	T418, ST10, N200E210	1	whiteware, molded	X
		1	clear glass	
218	T418, ST10, N210E200	1	whiteware, undecorated	X

219	T418, ST10, N210E210	1	unidentified nail frag	
220	Surface west of road	6	whiteware, undecorated	X
		1	stoneware, bristol stoneware	X
		2	turpentine pot frags	X
		2	clear glass	X
		2	aqua glass	X
		1	brown glass	X
		2	manganese glass	X
		1	window glass	X
		1	chert flake	
		2	shell fragments	
221	Surface, east of road	11	whiteware, undecorated	X
		3	stoneware, bristol/albany	X
		9	turpentine pot fragments	X
		1	milk glass, jar lid	X
		9	clear glass	X
		1	brown glass	X
		2	manganese glass	X
		3	aqua glass	X
		1	large hasp	X
		1	industrial pipe fragment	
		2	shell fragments	

Site Number 9LG47

Recorder: WO'CONNOR

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
222	Surface, 10m north of ST10	1	whiteware, undecorated	X
		1	whiteware, decalcomania	X
		1	pearlware, blue edge	X
		1	grey, salt glazed stoneware	X
		2	clear glass	X
		1	light green glass	X
		1	manganese glass	X
223	Surface near T383	1	whiteware, undecorated	X
		1	clear glass	X

APPENDIX 1. SPECIMEN CATALOG

Site Number Occurrences

Recorder: WO'CONNOR

Date: MARCH 27 1996

Spec No.	Location	Number	Description	Class 1
224	9LG50	1	unidentifiable nail frag	
225	9LG50	4	nails	
226	9LG52	1	flake	
227	9LG53	1	flake	
228	9LG54	1	flake	
229	9LG55, T100, ST6	1	flake	
230	" T100, 10 m north of ST6	1	flake	
231	9LG56	1	flake	
232	9LG57	1	flake	
233	9LG58	1	flake	
234	9LG59	1	chert fragment	
235	9LG60	1	flake	
236	9LG61	1	chert Small Savannah River Stemmed	X

ARCHAEOLOGICAL INVESTIGATIONS

HISTORIC RESEARCH

PRESERVATION

EDUCATION

INTERPRETATION

HERITAGE MARKETING

MUSEUM SUPPORT PROGRAMS

Chicora Foundation, Inc.
P.O. Box 8664 ▪ 861 Arbutus Drive
Columbia, South Carolina 29202-8664
Tel: 803/787-6910
Fax: 803/787-6910
Email: Chicora@bellsouth.net
www.chicora.org

Printed on Recycled Paper